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**WORKPLACE AGGRESSION BEHAVIORS,
ORGANIZATIONAL JUSTICE, AND INTENTION TO LEAVE
AMONG U.S. TELECOMMUNICATIONS WORKERS**

DOCTORAL DISSERTATION DEFENSE

Presented in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

Lynn University

By

Thomas A. Wilson

March 31, 2010

Order Number: _____

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**U.M.I.
300 N. Zeeb Road
Ann Arbor, MI 48106**

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You can kill a man only once, but when you humiliate him, you kill him many times over.

–The Talmud

Embarking upon a Ph.D. degree has been one of the most challenging, yet rewarding adventures I have experienced throughout life's journey. There are many individuals who have encouraged and supported me through this long process, and I would like to take this opportunity to show my appreciation to them. I especially want to acknowledge and thank Dr. Joan Scialli, who I consider to be my patient mentor. Dr. Scialli's untiring expertise, encouragement and guidance helped elevate me to a scholarly level.

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to the rest of my fantastic family. Your love and support gave me the courage to complete this doctoral program.

The brave men and women in telecommunications who participated in my study are to be commended. My hope is that their voices will be heard throughout many organizations and academia that workplace aggression behavior is a phenomena requiring utmost control to ensure a harmonious and productive working environment.

ABSTRACT

**WORKPLACE AGGRESSION BEHAVIORS,
ORGANIZATIONAL JUSTICE, AND INTENTION TO LEAVE
AMONG U.S. TELECOMMUNICATIONS WORKERS**

Workplace aggression behavior is a global phenomenon that casts a dark shadow on many of today's organizations, both public and private. As it frequently leads to violence, workplace aggression behaviors, which include harassment and bullying, have become a growing concern in the United States (Bandow & Hunter, 2007). Employees subjected to workplace aggression report a wide range of physical, psychological, and social complaints that prevent them from effectively performing their jobs (Fox & Spector, 2005). Employees who perceive feelings of injustice may experience decreased loyalty to their organizations (Tyler & Lind, 1992). Several researchers have examined aggression; however, little is known about the relationship among workplace aggression behaviors, organizational justice (procedural, distributive, interpersonal, and informational), and intention to leave. This study examines the fundamental theoretical literature and empirical studies related to workplace aggression behaviors, organizational justice, and intention to leave among U.S. telecommunications workers.

In examining the relationship among workplace aggression, organizational justice, and intention to leave, practices in the fields of psychology, organizational behavior, economics, ethics, and human resources were utilized. A theoretical framework based on Buss's (1961) three dichotomies of aggression behaviors (physical-verbal, active-passive, and direct-indirect), were used as a foundation for this dissertation. Three research questions, four hypotheses, and seven sub-hypotheses were developed for this non-

experimental, quantitative study to examine the relationships among workplace aggression behaviors, employee demographics and work profiles, organizational justice, and intention to leave.

A total of 1,654 surveys were randomly sent by Zoomerang Market Tools to an accessible population of management and non-management telecommunications employees located throughout the United States. Out of 242 completed surveys, 241 were usable. The response rate was 14.6%. The final data-producing sample closely represented the distribution of the telecommunications sectors (wireline, wireless, cable, and satellite) of the target population and provided support for external validity of the study so that findings could be generalized across sectors.

Furthermore, this study used an exploratory (comparative) and explanatory (correlational) survey to answer the research questions and test hypotheses. Exploratory data analysis, exploratory factor analysis, and coefficient alpha were used to examine the psychometric qualities of the scales. To answer the research questions, descriptive statistics were used. Additionally, to answer the exploratory (comparative) research questions, independent *t*-tests, one-way ANOVA, and Chi Square analysis were performed. Finally, to test the research hypotheses, stepwise (forward) hierarchical multiple regression were used to find the best explanatory models for respective hypotheses. This research examined the factors which exacerbate intention to leave and also identified areas for future scholarly study.

Findings were not as expected. Of the telecommunications workers sampled for this study, 1 in 5 employees or 21% reported frequent experiences with *workplace aggression behaviors*. Results were inconsistent with Matthiesen and Einarsen's (2007)

and Namie and Namie's (2000) research that reported approximately one in ten individuals were victims of workplace bullying.

Distributive Justice and *Informational Justice* were significant explanatory variables of *Intention to Leave* for employees in the *Satellite Telecommunications* sector than any of the other sectors. Future studies utilizing this study's model to examine increased *Workplace Aggression*, *Organizational Justice*, and *Intention to Leave* among the *Satellite Telecommunications* sector is recommended.

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CHAPTER I

INTRODUCTION TO THE STUDY

Introduction and Background to the Problem

Workplace aggression behavior is a global phenomenon that casts a dark shadow on many of today's organizations, both public and private. As it frequently leads to violence, workplace aggression behaviors, which include harassment and bullying, have become a growing concern in the United States (Bandow & Hunter, 2007). Workplace bullying includes repeated hostile and aggressive behaviors, either physical or non-physical, that are directed at workers and leads to victimization (Namie, 2000). Individuals who are recipients of this unwarranted behavior typically feel humiliated, offended, and distressed (Namie, 2000). Employees subjected to workplace aggression report a wide range of physical, psychological, and social complaints that prevent them from effectively performing their jobs (Fox & Spector, 2005).

Enron's former chief financial officer, Andrew Fastow, is a key example of an individual who exhibited workplace aggression behaviors. He was known as a bully who threw fiery tantrums at Enron's outside bankers and berated employees for being disloyal when they refused to go along with illegal accounting procedures (Appelbaum & Roy-Girard, 2007). Through intimidation, he created a culture of autocracy, and in fear of losing their jobs and avoiding punishment, employees were obedient to his demands (Appelbaum & Roy-Girard, 2007). This negative work environment produces feelings of anger, low morale, despair, and depression and results in higher absenteeism, poor work performance and increased turnover. Not only does workplace aggression interfere with

job performance, it also causes an unharmonious and unfriendly working environment affecting the organization adversely.

Since just and fair treatment is a basic human right that all employees deserve, it is also essential to the organization to avoid suffering unintended consequences that challenge the credibility of the organization (Pfeffer, 1997). Employees who perceive feelings of injustice may experience decreased loyalty to their organizations (Tyler & Lind, 1992). Conversely, employees who feel they are treated fairly feel enhanced motivation (Vroom, 1964). Throughout their work lives, employees encounter organizational justice in a variety of ways. Concerns about fairness with salary, promotions, outcomes of disputes, treatment by authority figures, and interpersonal treatment received from other employees are all considered forms of organizational justice (Greenberg & Colquitt, 2005). Empirical research on organizational justice suggests that fair treatment results in positive employee attitudes and higher job performance (Konovsky, 2000).

Workers tend to evaluate organizational justice within four classifications of experiences; the outcomes resulting from policies or processes (procedural justice), the outcomes employees receive based on their contribution to the organization (distributive justice), how courteously and politely employees are treated by their managers and (interpersonal justice), and the communications employees receive from authority figures explaining procedures within the organization (informational justice) (Colquitt, 2001). Employees' perceptions of fair treatment result in increased job satisfaction and organizational commitment (Konovsky, 2000). Conversely, unfair treatment has been

found to result in employee retaliatory behaviors (Skarlicki & Latham, 1997; Konovsky, 2000).

According to Namie (2003), once targeted, bullied victims “have a 70 percent chance that they will lose their jobs, either voluntarily or through constructive discharge” (Namie, 2003, p. 3). Employees who are forced to resign from their jobs under “conditions so difficult that any reasonable person laboring under similar circumstances would feel compelled to resign,” are considered to leave by *constructive discharge* (Gregory, 2004, p. 157). In addition to the high cost of turnover, incidents of workplace aggression behaviors such as bullying, verbal, and physical attacks can cause great financial loss to organizations due to litigation, lower productivity, and negative corporate public image (Le Blanc & Kelloway, 2002). Along with the financial loss of human capital, organizations with high turnover also experience a loss in accumulated knowledge and experience. Human resource managers must also concern themselves with filling vacancies by searching for new candidates; this involves interviewing, hiring, and training new employees to replace those who leave (Price, 2001).

In the United States, workers are protected against sexual and racial harassment in the workplace under the umbrella of Title VII of the Civil Rights Act of 1964 which extends protection from persecution or discrimination based on religion, race, ethnicity, sexual orientation, age, and veteran status (Vega & Comer, 2004). However, workers do not enjoy protection from workplace aggression. Although workplace aggression and bullying is illegal in many other countries, it is not illegal in the United States (Vega & Comer, 2005). Workplace aggression is a new area of scholarly study associated with employee mistreatment in organizations (Bandow & Hunter, 2007).

Purpose

The purpose of this exploratory (comparative) and explanatory (correlational) study is to examine the relationships among workplace aggression behaviors, employee demographics and work profiles, organizational justice, and intention to leave. Management and non-management telecommunications employees in the U.S. were used as the sample population for this study. There are eight specific purposes of this study, which include one descriptive, two exploratory, and four explanatory.

1. The descriptive purpose is to set forth the characteristics of all variables, demographic, work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), frequency of aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave.
2. The first exploratory purpose is to compare differences of work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave according to employee demographic characteristics.
3. The second exploratory purpose is to compare differences of demographic characteristics, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice and informational justice), workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave according to employee work profiles.

4. The first explanatory purpose is to examine the relationship among organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) and the workplace environment (workplace aggression, *passive-active*, *verbal-physical*, *direct-indirect* behaviors).
5. The second explanatory purpose is to examine the relationship among organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) and intention to leave.
6. The third explanatory purpose is to examine workplace aggression behaviors (*passive-active*, *verbal-physical*, *direct-indirect*) and intention to leave.
7. The fourth explanatory purpose is to examine the relationship among employee demographic characteristics, work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), workplace aggression behaviors (*passive*, *active*, *verbal*, *physical*, *direct*, *indirect*), and intention to leave.

Definitions of Terms

The variables measured in this study may be independent (predictors) or dependent (outcome), depending upon the research question or hypotheses (Field, 2005). For example, workplace aggression behaviors may be both independent variables (research purposes 1, 2, 3, 6, and 7) and dependent variables (research purpose 4).

Workplace Aggression Behaviors

Theoretical definition. “Aggression is defined as a response that delivers noxious stimuli to another organism” (Buss, 1961, p. 1). Workplace aggression behaviors are "attempts by individuals to inflict harm to others with whom they work, or have worked, or to the organizations in which they are currently, or were previously employed" (Neuman & Baron, 1997, p. 38). Buss's (1961) three typologies of aggression, passive-active, direct-indirect, and verbal-physical, are further defined as follows:

Operational definition. Workplace aggression behaviors were measured by the WAR-Q (Workplace Aggression Research Questionnaire) (see Table 3-2). The WAR-Q is a 60-item scale which was developed by Neuman and Keashly (2004) to measure the frequency of the three types of workplace aggression behaviors proposed by Buss (1961); passive-active, direct-indirect, and verbal-physical. All items of the WAR-Q are rated on a 7-point frequency rating scale of 1) *never*, 2) *once*, 3) *a few times*, 4) *several times*, 5) *monthly*, 6) *weekly*, and 7) *daily* (Neuman & Keashly, 2004). The score range for the total scale is 60-420. The type of aggression behavior for the subscale, number of items of each subscale and the items forming the subscale are as follows: *Passive Aggression*, 17 items, with a score range of 17 to 119; *Active Aggression*, 43 items, with a score range of 43 to 301; *Direct Aggression*, 45 items, with a score range of 45 to 315; *Indirect Aggression*, 15 items, with a score range of 15 to 105; *Verbal Aggression*, 40 items, with a score range 40 to 280; and *Physical Aggression*, 20 items, with a score range of 20 to 140 (Neuman & Keashly, 2004). (See Table 3-2 and Appendix A, Part 4).

Passive Aggression

Theoretical definition. “Noxious stimuli may also be delivered in the absence of an active response by the aggressor; he may aggress by preventing the victim from achieving a goal. Blocking of another’s path is aggressive in that noxious stimuli are presented to the victim, despite the aggressor’s lack of activity” (Buss, 1961, p. 9). Passive aggression involves withholding something that the target needs or values. Some examples are refusing to provide the target with information or resources required to do his or her job, or giving the silent treatment (Baron & Neuman, 1996, 1998; Baron, Neuman, & Geddes, 1999; Geddes & Baron, 1997; Neuman & Keashly, 2004).

Operational definition. In this study, passive aggression was measured by 17 items of the WAR-Q, which measured passive aggression behaviors using a 7-point frequency rating scale of 1) *never*, 2) *once*, 3) *a few times*, 4) *several times*, 5) *monthly*, 6) *weekly*, and 7) *daily* (Neuman & Keashly, 2004). (See Table 3-2 and Appendix A, Part 4).

Active Aggression

Theoretical definition. “Most aggressive responses are active; the aggressor makes an instrumental response that delivers noxious stimuli to the victim” (Buss, 1961, p. 8). Active aggression requires the actor to do something to harm the target such as rape or physical assault or yelling and shouting (Neuman & Baron, 1996, 1998; Baron, Neuman & Geddes, 1999, Geddes & Baron, 1997; Neuman & Keashly, 2004).

Operational definition. In this study, 43 three items on the WAR-Q measured active aggression behaviors using a 7-point frequency rating scale of 1) *never*, 2) *once*, 3)

a few times, 4) *several times*, 5) *monthly*, 6) *weekly*, and 7) *daily* (Neuman & Keashly, 2004). (See Table 3-2 and Appendix A Part 4).

Direct Aggression

Theoretical definition. This type of aggression may be verbal or physical and involves deliberate delivery of noxious stimuli to the victim (Buss, 1961). With direct aggression, the actor harms the target directly (Neuman & Baron, 1996, 1998; Baron, Neuman & Geddes, 1999; Geddes & Baron, 1997; Neuman & Keashly, 2004).

Operational definition. In this study, 45 items of the WAR-Q measured direct aggression behaviors using a 7-point frequency rating scale of 1) *never*, 2) *once*, 3) *a few times*, 4) *several times*, 5) *monthly*, 6) *weekly*, and 7) *daily* (Neuman & Keashly, 2004). (See Table 3-2 and Appendix A, Part 4).

Indirect Aggression

Theoretical definition. “Indirect aggression may be verbal (spreading nasty gossip) or physical (a man who sets fire to his neighbor’s home)” (Buss, 1961, p. 8). Both examples make it difficult to identify the aggressor, thus avoiding counterattack; however, in each case the victim is harmed (Buss, 1961). The aggressor inflicts harm on something the target values or someone the target cares about (Neuman & Baron, 1996, 1998; Baron, Neuman, & Geddes, 1999; Geddes & Baron, 1997; Neuman & Keashly, 2004).

Operational definition. In this study, 15 items of the WAR-Q measured indirect aggression behavior using a 7-point frequency rating scale of 1) *never*, 2) *once*, 3) *a few times*, 4) *several times*, 5) *monthly*, 6) *weekly*, and 7) *daily* (Neuman & Keashly, 2004). (See Table 3-2 and Appendix A, Part 4).

Verbal Aggression

Theoretical definition. “Verbal aggression is defined as a vocal response that delivers noxious stimuli to another organism” (Buss, 1961, p. 6). The noxious stimuli are rejection and threat. Verbal aggression inflicts harm through words such as yelling, shouting, or spreading damaging gossip (Neuman & Baron, 1996, 1998; Baron, Neuman, & Geddes, 1999; Geddes & Baron, 1997; Neuman & Keashly, 2004).

Operational definition. In this study, 40 items of WAR-Q measured verbal aggression behaviors using a 7-point frequency rating scale of 1) *never*, 2) *once*, 3) *a few times*, 4) *several times*, 5) *monthly*, 6) *weekly*, and 7) *daily* (Neuman & Keashly, 2004). (See Table 3-2 and Appendix A, Part 4).

Physical Aggression

Theoretical definition. “Physical aggression may be defined as an assault against an organism by means of body parts (limb, teeth) or weapons (knife, club, gun)” (Buss, 1961, p. 4-5). The noxious stimuli are pain and injury. Physical aggression involves physical actions on the part of the aggressor and includes pushing, shoving, assault, unwanted touching, or the defacement of property (Neuman & Baron, 1996, 1998; Baron, Neuman, & Geddes, 1999; Geddes & Baron, 1997; Neuman & Keashly, 2004).

Operational definition. In this study, 20 items of the WAR-Q (see Table 3-2) measured physical aggression behaviors using a 7-point frequency rating scale of 1) *never*, 2) *once*, 3) *a few times*, 4) *several times*, 5) *monthly*, 6) *weekly*, and 7) *daily* (Neuman & Keashly, 2004). (See Table 3-2 and Appendix A, Part 4).

Organizational Justice

Theoretical definition. Early research on organizational justice focused on two main facets: employees' reactions to what they receive in terms of outcomes (distributive justice), and the procedures of how the outcomes were distributed (procedural justice) (Adams, 1965; Leventhal, 1980; Thibaut and Walker, 1975). Bies and Moag (1986) suggested a third facet (interactional justice) in which employees evaluate the fairness received from their authority figures. Greenberg (1993) distinguished between two elements of interactional justice; interpersonal justice (treating employees with politeness and respect), and informational justice (how employees receive explanations about events and processes).

Operational definition. Organizational justice is composed of four justice dimensions: procedural, distributive, interpersonal and informational (defined below). Colquitt's (2001) instrument was designed to investigate the theoretical dimensions of organizational justice and also to test the construct validity of a new justice measure. The 20-item scale was taken from the theoretical origins grounded in the seminal works of organizational justice literature: procedural justice, distributive justice, interpersonal justice and informational justice (Colquitt, 2001). A 5-point frequency rating of 1) *to a very small extent*, 2) *to a small extent*, 3) *neutral*, 4) *to a large extent*, and 5) *to a very large extent* was used (Colquitt, 2001). (See Table 3-2 and Appendix A, Part 3).

Procedural Justice

Theoretical definition. Procedural justice concerns the perceived fairness of the procedures and general principles used to make decisions within the organization (Thibaut & Walker, 1975; Leventhal, 1980). Procedural justice involves the principles of

employee voice, influence over outcomes of procedures, consistency, freedom from bias, accuracy, appeal, and ethical and moral standards (Colquitt, 2001).

Operational definition. Seven items measured procedural justice in Colquitt's (2001) Organizational Justice scale and were extracted from the works of Thibaut and Walker (1975) and Leventhal (1980). A 5-point frequency rating of 1) *to a very small extent*, 2) *to a small extent*, 3) *neutral*, 4) *to a large extent*, and 5) *to a very large extent* is used (Colquitt, 2001). (See Table 3-2 and Appendix A, Part 3).

Distributive Justice

Theoretical definition. Distributive justice is defined as the employee's evaluations of the degree of fairness of rewards received in relationship to their work efforts (Leventhal, 1980). Distributive justice evaluates employee outcomes in relationship to employee inputs.

Operational definition. Four items measured distributive justice in Colquitt's (2001) Organizational Justice scale and were based on the works of Leventhal, 1980. A 5-point frequency rating of 1) *to a very small extent*, 2) *to a small extent*, 3) *neutral*, 4) *to a large extent*, and 5) *to a very large extent* is used (Colquitt, 2001). (See Table 3-2 and Appendix A, Part 3).

Interpersonal Justice

Theoretical definition. Interpersonal justice is defined as the treatment of individuals with respect and sensitivity by decision makers and coworkers (Bies & Moag, 1986). Interpersonal justice defines the treatment employees receive when new procedures are implemented.

Operational definition. Four items measured interpersonal justice in Colquitt's (2001) Organizational Justice scale and were based on the work of Bies and Moag, 1986 (see Table 3-2). A 5-point frequency rating of 1) *to a very small extent*, 2) *to a small extent*, 3) *neutral*, 4) *to a large extent*, and 5) *to a very large extent* is used (Colquitt, 2001). (See Table 3-2 and Appendix A, Part 3).

Informational Justice

Theoretical definition. Informational justice is defined as a process by which decision makers explain and communicate the rationale for decisions thoroughly (Bies & Moag, 1986; Shapiro, Buttner & Barry, 1994). Informational justice identifies how well an authority figure communicates and explains procedures.

Operational definition. Five items measured informational justice in Colquitt's (2001) Organizational Justice scale, based on the works of Bies and Moag (1986) and Shapiro et al. (1994) (see Table 3-2). A 5-point frequency rating of 1) *to a very small extent*, 2) *to a small extent*, 3) *neutral*, 4) *to a large extent*, and 5) *to a very large extent* is used (Colquitt, 2001). (See Table 3-2 and Appendix A, Part 3).

Intention to Leave

Theoretical definition. Intention to leave or voluntary turnover is "the degree of individual movement across the membership boundary of a social system" (Price, 1977, p. 4). "Transfers and promotions are not considered part of turnover because they do not involve movement across the membership boundary of the organization" (Price, 1977, p. 5).

Operational definition. In this study, intention to leave refers to the degree of turnover intention of management and non-management telecommunications employees

in the U.S., and was measured by the Turnover Intention scale. A five-item, 5-point Likert scale, designed by Kim, Price, Mueller, and Watson (1996) was adapted with permission from Mueller for this study. (See Table 3-2 and Appendix A, Part 5).

Employee Demographic Characteristics

Theoretical definition. According to social identity theory (Tajfel & Turner, 1979), people tend to classify themselves and others according to some prominent characteristics, in which demographics plays a large part. In this study, employee demographic information is gathered to describe the sample.

Operational definition. Employee demographics include information about chronological age, gender, race, ethnicity, and education. Race and ethnicity were based on the U.S. Census Bureau (2008) categorization. Five fill-in-the-blank, dichotomous, and multiple choice items measured employee demographics (See Table 3-2 and Appendix A, Part 1).

Work Profiles

Theoretical definition. Social identity theory (Tajfel & Turner, 1979) suggests that people tend to classify themselves and others according to some prominent characteristics, in which work profiles play a large part. In this study, work profile information was gathered to describe the sample.

Operational definition. Work profiles included employee information about seniority (years of employment specified in years), job category (management or non-management), number of people supervised (if management), level of supervisory responsibility, number of employees at work location, and type of telecommunications sector. Six questions designed by the researcher measured employee work profiles,

consisted of fill-in-the-blank, dichotomous, and multiple choice items (See Table 3-2 and Appendix A, Part 2).

Justification

Studies have shown that there is a positive relationship between workplace aggression and intention to leave (Djurkovic, McCormack, & Casimir, 2004; Keashly & Neuman, 2005; Tepper, 2000; Tepper et al., 2006; Yeh, 2007). Furthermore, factors surrounding employees' perceptions of organizational justice (procedural, distributive, interpersonal, and informational) also impact intention to leave (Andersson-Straberg, et al., 2007; Loi et al., 2006; Tepper et al., 2006; Yeh, 2007). Previous research has confirmed that intention to leave is one of the paramount predictors of employee turnover (Griffeth, Hom, & Gaertner, 2000; Mobley, Horner, & Hollingsworth, 1978). Because turnover costs to replace employees can be expensive to companies, the topic was identified as essential for organizations to recognize the importance of maintaining employee well-being, job satisfaction, and retention. Although workplace aggression is a problem for U.S. workers, "the United States has lagged behind the rest of the world in the identification and investigation of this phenomenon" (Vega & Comer, 2005, p. 101).

Many researchers agree that there are four prospective causes of workplace bullying: the organization, the perpetrator, the social work group, and the targeted employee (Einarsen, 1999). "Bullying will only take place if the offender feels he has the blessing, support, or at least the implicit permission by his superiors to behave in this manner" (Einarsen, 1999, p. 21). Toxic leadership styles such as tyrannical combined with a laissez-fair management approach may contribute to bullying or suggest that workplace aggression is acceptable behavior (Hoel & Salin, 2003). Matthiesen and

Einarsen (2007) found that approximately one in ten individuals were victims of workplace bullying. Understanding the phenomena of human aggression behavior is imperative to effectively address the many challenges organizations face in today's global workplace. It is of great importance for organizations to safeguard competitive advantage, maintain employee well-being, job satisfaction, and retention.

Previous studies have not examined workplace aggression using Buss's (1961) three typologies (passive-active, direct-indirect, and verbal-physical), Colquitt's (2001) organizational justice's four dimensions (procedural justice, distributive justice, informational justice, and interpersonal justice), and intention to leave. Additionally, the literature is scant on studies explaining the effects of workplace aggression behaviors on organizational justice and intention to leave outside of a university setting, which limits generalizability of findings. Furthermore, no studies have been conducted utilizing U.S. telecommunications workers. Overcoming these limitations will be the focus of this study.

The topic of this study was researchable because all variables, research questions, and hypotheses were measured by scientific questionnaires and statistical analysis. By utilizing an online survey instrument distributed through Zoomerang Market Tools, this study was feasible since it was implemented within a reasonable time frame and cost efficiency. Furthermore, the data collection process was expedited since the results of the online data collection process were electronically retrieved and less time-consuming than mailing surveys and providing return postage-paid envelopes. This topic of research was designed to contribute to the North American research base on workplace aggression literature and enhance awareness that is crucial for organizations in order to preserve

market competition. Lastly, through this study, the goal was to solicit interest by proposing action in the U.S. legal system to play a stronger role in both preventing and punishing perpetrators of workplace aggression and in compensating targets of this egregious behavior.

Delimitations and Scope

This study was conducted based on the following delimitations, which constrained the study of workplace aggression, organizational justice, and intention to leave in the U.S. telecommunications sector:

1. The research focused only on management and non-management employees in the U.S. telecommunications sector because a wide range of working experiences and positions could reduce the reliability of the study.
2. The research focused on employees within the U.S. telecommunications sector because of the accessibility of the sample population to the researcher.
3. The results of this study represented workplace aggression, organizational justice, and intention to leave within the U.S. telecommunications industry, but may not be applicable to other countries and industries, because each industry has its own leadership style, organizational culture, levels of job satisfaction, working hours, and reward system. Each country also has a unique culture, economic situation, and traditional values. However, the results of the study will provide adequate valuable information for future research in these areas.
4. The study did not take into account any unpredictable internal and external factors, such as financial difficulties, political impacts, or war, nor

macroeconomic indicators such as the unemployment rate, Gross Domestic Product (GDP), or Consumer Price Index (CPI).

5. The research did not consider management's leadership style and the employees' personality traits, because to evaluate those variables, it would be necessary to use an entirely different research design and sampling plan.
6. Since workplace aggression behaviors, organizational justice, and turnover intention are sensitive issues to both employer and employee, the online data collection process was encrypted and was conducted in complete anonymity in order to receive candid responses from participants. Since the data collection process was anonymous, it would be impossible to identify participants for further research.
7. The research focused on employees who were 18 years of age or older.
8. The study did not include individuals who were unable to read and write in English.
9. The research focused on employees who were full time because using temporary or sub-contracted employees could reduce the reliability of the study.
10. The research focused on employees who had an active e-mail address in order to participate in the online survey.

Organization of the Study

Five chapters were developed and depicted for this research study. Chapter I provides an overview of the study. Moreover, it comprises the background, the purpose, the justification, and the delimitations of the study as well as definitions of all variables.

Chapter II of this study provides a detailed literature review about workplace aggression behaviors, organizational justice, and intention to leave. In this chapter, a critical analysis of theoretical literature and measures of workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), and intention to leave is presented. Through the review of the literature, a theoretical framework, research questions, research hypotheses, and hypothesized model tested in this study were derived from gaps in the literature.

Chapter III illustrates the research methods to test the hypothesized model as well as the research questions and hypotheses. Included in Chapter III is a description of the exploratory (comparative) and explanatory (correlational) research design, the population sampling plan, instrumentation, ethical considerations, and data collection procedures, along with methods of data analysis and evaluation of research methods. To guide this study, Chapter III presents the research methods utilized in answering the research questions and testing the hypotheses about the relationship among workplace aggression behavior, employee demographics and work profiles, organizational justice, and intention to leave. Chapter IV also describes a description of the sample, psychometric qualities of the measures, answers to research questions, and results of hypothesis testing. Finally, Chapter V presents the conclusions, interpretations, and implications of the findings. In addition, Chapter V describes limitations of the study and identifies areas for future scholarly study.

CHAPTER II

REVIEW OF LITERATURE, THEORETICAL FRAMEWORK, RESEARCH QUESTIONS, AND RESEARCH HYPOTHESES

Review of the Literature

Within the past decade, workplace aggression has been growing at a staggering rate, resulting in exponential costs to organizations globally. In the United States, 25 to 30 percent of workers reported continual abuse at work (Keashly & Neuman, 2005). Daily news reports have scattered the media with stories about employees “going postal” (Olson, Nelson, & Parayitam, 2006, p. 384). Neuman and Baron (1998) propose that a clear distinction between *workplace aggression* and *workplace violence* be identified. “Workplace aggression is a general term encompassing all forms of behavior by which individuals attempt to harm others at work or their organizations, and workplace violence refers only to instances involving direct physical assaults” (Neuman & Baron, 1998, p. 393). Keashly (2001) argues that *emotional abuse* is any behavior that is non-physical, repeated, and hurtful to the victim. Workplace aggression research seeks to uncover hostile behaviors at work that are related to workplace bullying (Keashly & Jagatic, 2002). “Those who have been bullied show decreased job satisfaction, reduced organizational commitment, and greater intention to leave” (Keashly & Neuman, 2005, p. 342).

This literature review was organized by major themes that are relevant to the key issues about the effects of workplace aggression behavior on organizational justice and employees’ intention to leave. This deductive approach begins with a theoretical overview of aggression behaviors, which includes schoolyard bullying, workplace

bullying, organizational climate, target characteristics, and diversity. Next, a theoretical review of the four organizational justice dimensions, *distributive justice*, *procedural justice*, *interpersonal justice*, and *informational justice* is presented, followed by a theoretical overview of employee intention to leave. Modern literature is explored following each theme. Throughout this literature review, the term *workplace aggression* will be used to encompass all forms of abusive behaviors such as *workplace bullying*, *mobbing*, *emotional abuse*, and *harassment*.

Workplace Aggression Behaviors

Theoretical review. In 1961, Arnold H. Buss proposed how aggressive behavior is an instrumental response that projects noxious stimuli onto another organism. Buss (1961) argues that all aggressive responses involve the delivery of (or attempts to deliver) noxious stimuli in an interpersonal manner. To explain why humans participate in aggressive behaviors, Buss (1961) presented two major reinforcers of aggression, “angry aggression” and “instrumental aggression” (p. 2). With angry aggression, the stimulus of the victim (target) who is experiencing pain and suffering serves as reinforcement for the aggressive act. The reward the aggressor receives for angry aggression is the pain and suffering the victim experiences (Buss, 1961). With instrumental aggression, the rewards to the aggressor are extrinsic, such as money, sex, dominance, and the removal or escape from aversive stimuli (Buss, 1961). The victim’s injuries, either emotional or physical, are not consequences with instrumental aggression; the reinforcer is the aggressor achieving the extrinsic reward. Although the two classes of reinforcers are distinct, they are not mutually exclusive. According to Buss (1961), many situations operate with both angry and instrumental aggression.

Buss (1961) further proposed how human aggression theory can be analyzed using three typologies of aggression behaviors: *physical-verbal*, *active-passive*, and *direct-indirect*. According to Buss (1961), this framework is useful in identifying potential aggressors in the workplace. Physical aggression is a blatantly obvious act such as striking or pushing another individual, while verbal aggression includes insults or abusive language (Buss, 1961). Active aggression reflects how the behavior produces pain or injury, whereas passive aggression is much more subtle, as when valuable information is withheld, or the aggressor purposely refuses to notify a targeted individual of an important meeting (Buss, 1961). Direct aggression is overt and involves a direct interaction between the aggressor and his/her target such as physical assault or purposely insulting an individual directly to his or her face (Buss, 1961). Indirect aggression is covert, making it difficult to identify the aggressor, as in spreading malicious rumors, ostracism, gossiping or defamation of character (Buss, 1961). The aggressor's intention is to cause harm to the targeted individual.

Baron and Neuman (1996) expanded on Buss's (1961) theory of human aggression and applied the theory to hostile workplace behaviors. Aggression behavior originates from the interaction of various "social, situational, and personal factors" (Neuman & Baron, 1998, p. 402). Baron and Neuman (1996) created a framework of eight types of workplace aggression categories using Buss's (1961) typologies: (1) verbal-passive-indirect, (2) verbal-passive-direct, (3) verbal-active-indirect, (4) verbal-active-direct, (5) physical-passive-indirect, (6) physical-passive-direct, (7) physical-active-indirect, and (8) physical-active-direct. Each of Baron and Neuman's (1996) eight items represents a segment of Buss's (1961) three typologies of aggression, physical-

verbal, active-passive, and direct-indirect. Baron and Neuman (1996) and Neuman (2003) did find that aggression in work environments is more verbal than physical, more passive than active, and more direct than indirect. In general, covert aggression is much more prevalent than overt aggression (Baron & Neuman, 1996; Neuman, 2003).

Neuman and Keashly (2004) developed the Workplace Aggression Research Questionnaire (WAR-Q) incorporating Buss's (1961) framework. Neuman and Keashly (2004) categorized each of Buss's (1961) three typologies of aggression into six subscales: *passive aggression*, *active aggression*, *verbal aggression*, *physical aggression*, *direct aggression*, and *indirect aggression*. The WAR-Q consists of a 60-item questionnaire, and reliability was tested on a sample of 8,596 U.S. Department of Veterans Affairs employees over a three-year time frame, from November, 2000 to November, 2002 (Neuman & Keashly, 2004). Based on completed data for all 60 questionnaire items from 6,044 Veteran Affairs employees, reliability alpha resulted in .95 for the total scale (Neuman & Keashly, 2004).

Perhaps the earliest published research on workplace aggression was written by Dr. Carroll M. Brodsky (1976), a North American professor of psychiatry, who published *The Harassed Worker*. Brodsky (1976) identified three sources of harassment in the workplace: 1) by people, 2) by work pressure, and 3) by the system. Harassment by people, such as managers, coworkers, customers, and friends "ultimately relates to the issue of control or power to keep someone else in line" (Brodsky, 1976, p. 47). Brodsky's (1976) view of hierarchical harassment argues that it is "easier to shit [*sic*] downward than upward" (p. 49). Brodsky (1976) proposed that work pressure as harassment identifies the persistence to "get the most out of the worker" (p. 61).

Harassment by the system, according to Brodsky (1976), arises when employees make claims such as they “can’t stand working in this kind of atmosphere,” with constant monitoring, micro-managing, or that they are being held back and put down (p. 83).

Brodsky (1976) further identified that the harasser “himself usually is subservient to authority. He dares not cross anyone above him and cannot tolerate opposition from those below him. He believes firmly that rank has privilege” (p. 107). Although at the time Brodsky’s work was ignored, it did provide a catalyst for Scandinavian researchers who expanded research on schoolyard bullying (Olweus, 1978, 1980) and also with workplace bullying (Einarsen, Raknes, & Matthiesen, 1994; Leymann, 1990).

Early European research on workplace aggression and psychological terror was conducted in the 1980’s by Heinz Leymann, a Scandinavian psychologist. Leymann (1990) identified a form of workplace aggression known as *mobbing*, which is the term used frequently in European literature referencing bullying (Rayner & Hoel, 1997, p. 182). Leymann (1990) defined mobbing as “hostile and unethical communication which is directed in a systematic way by one or a number of persons mainly toward one individual” (p. 120). According to Leymann (1990), “these actions take place often (almost every day) and over a long period (at least for six months) and, because of this frequency and duration, result in considerable psychic, psychosomatic and social misery” (p. 120). Leymann (1996) was also instrumental in developing the LIPT (Leymann Inventory of Personal Terror), which formed the foundation for quantitative research to measure aggression behaviors in the field of social research.

Schoolyard bullying. Many personnel issues faced in the workplace between the bully and the targeted employee are the same as those experienced on the school

playground (Harvey, Heames, Richey, & Leonard, 2006). Olweus (1980) found that mothers who condone aggressive behavior naturally predicted childhood aggression. Olweus (1991) also found in a Norwegian junior high school study that 7.4% of the boys were victims of bullying compared to 3.3% of girls. Relationships among boys are usually rougher and more aggressive than interactions among girls (Olweus, 1991).

Children learn from their significant caregivers, adults, role models, and peers to utilize aggressive acts in order to get what they want. According to Tremblay (2007), children who are raised in an environment of adults and other children who display aggressive behavior will sense that aggression is a part of everyday life. Conversely, children who are surrounded by adults and others who do not tolerate aggressive behavior and promote pro-social behavior will most likely utilize positive means instead of aggression to obtain what they want (Tremblay, 2007). Tremblay (2007) reported that the peak age for children demonstrating physical aggression is between ages two and four.

Olweus (1978) found that children who were victims of bullying appear to be more cautious, sensitive, and anxious and tend to hold negative views of themselves. Because of these negative views, the victims frequently suffer from low self-esteem. Olweus (1978) identified this group of children as *submissive victims* because these children were passive, insecure, frequently rejected by peers, and not likely to defend themselves under attack. Olweus (1978) also identified another smaller group of victims as being highly aggressive to provoke attack from others and labeled this group of children as *provocative victims*. Provocative victims are characterized as having both anxious and aggressive attributes. This group of children behaves in ways such that

others, such as classmates or teachers, may become irritated or annoyed with their behavior (Olweus, 1978). The provocative victim may bully smaller or weaker children and at the same time be targets of bullying by older children. Because both types of victims can be found in the workplace, Aquino and Bradfield (2000) argue that both submissive and provocative victims may participate to some extent in their own victimization. Brodsky (1976) claims that “after studying harassers and studying their victims, it seemed that there was never a victim who would not have made an excellent harasser” (p. 109).

Workplace bullying. Andrea Adams (1992), a freelance broadcaster and journalist in Great Britain raised public awareness in the U.K. about workplace bullying with her book, *Bullying at Work*. Adams’s (1992) book explores personal accounts of targeted employees’ demoralizing experiences of bullying behavior and describes the bully as either a supervisor or manager. After her death in 1995, the Andrea Adams Trust was established in 1997 as the “world’s first non-political, non-profit making charity operating as the focus for the diverse and complex problems caused by bullying behavior in the workplace” (n.p.). In addition to providing understanding and support for targets of bullying behavior, the organization also conducts research.

Most of the research on workplace bullying originated in Scandinavia where there is a strong public awareness (Quine, 1999). Laws have been enacted exclusively to protect individuals against bullying and mobbing in Sweden in 1993, and Norway in 1994 (Rayner & Hoel, 1997). Building on research from schoolyard bullying (Olweus, 1978, 1980), Scandinavian researchers Einarsen, Hoel, Zapf, and Cooper (2003) defined bullying as “harassing, offending, socially excluding someone or negatively affecting

someone's work tasks. In order for the label bullying (or mobbing) to be applied to a particular activity, interaction or process it has to occur repeatedly and regularly (such as weekly) and over a period of time (e.g. about six months). Bullying is an escalating process in the course of which the person confronted ends up in an inferior position and becomes the target of systematic negative social acts. A conflict cannot be called bullying if the incident is an isolated event or if two parties of approximately equal 'strength' are in conflict" (p. 15).

To constitute bullying, aggressive episodes must occur frequently, at least weekly or more. Most researchers disregard one-time episodes of aggression as bullying incidents (Einarsen, et al., 2003; Leymann, 1990; Rayner, Hoel, & Cooper, 2002; Salin, 2003). According to Namie and Namie (2000), "bullying encompasses all types of mistreatment at work. All harassment is bullying as long as the actions have the effect, intended or not, of hurting the target" (p. 3).

Einarsen (1999) further distinguished between the concepts of predatory and dispute-related bullying. Predatory bullying refers to an abuse of power of a stronger person over a vulnerable individual who has done nothing provocative to justify the aggression (Einarsen, 1999). The victims are targeted because they accidentally happen to be in a situation where the perpetrator is demonstrating power. The victim may be bullied by being an "easy target of frustration and stress caused by other factors" (Einarsen, 1999, p. 5). This negative work environment produces feelings of anger, low morale, despair, and depression and results in higher absenteeism, poor work performance, and increased turnover. Many times, the organization turns a blind eye to predatory bullying which poses little cost of retribution to the bully (Brodsky, 1976).

Felson and Tedeschi (1993) proposed that dispute-related aggression stems from real or imagined wrong-doings and is triggered by conflicts in the work environment. According to Felson (2006), individuals engage in aggressive behaviors because “they can (a) force others to comply, (b) restore justice when they have been wronged, (c) achieve a desired image or reputation, and (d) entertain themselves with a potentially risky activity” (p. 8.). Furthermore, “They have a grievance with their victim; they are angry; and they want to see their victim suffer in some way” (Felson, 2006, p. 12).

Targets of dispute-related bullying typically show feelings of being insulted, resentment, and anger and in many cases retaliate with aggressive behavior (Einarsen, 1999). When the power struggle has reached peak levels, victimization of the opponent is the result. The ultimate goal of the perpetrator is total destruction of the opponent. Whatever definition is used, either predatory or dispute-related, bullying is an aggressive behavior that involves an imbalance of power between the perpetrator and target, and occurs frequently (Einarsen, 1999; Felson, 2006). According to Einarsen (1999), envy may be a conceivable explanation for why some individuals are subjected to abusive behaviors. Victims of bullying have been described as being competent employees, who may be viewed by others as patronizing. Additionally, employees who are perceived as annoying may provoke aggressive behaviors in others (Felson, 2006).

Organizational climate. Denise Salin (2003) developed a theoretical model that suggests how enabling, motivating, and triggering factors within the organization influence workplace bullying. Enabling factors describe aspects which allow bullying to occur in the first place, but are not enough to create bullying by themselves (Salin, 2003). According to Salin (2003) these enabling factors include a perceived imbalance of power

between the bully and victim, a perceived low cost to the bully, and dissatisfaction with work control and work environment.

Motivating factors make it sensible for the bully's egregious behavior to eliminate contemporaries who may be burdens or threats to the bully, especially if the organization has a high employee rewards or bonus system to eliminate rivals (Salin, 2003). This is also prevalent when there is competition for promotions or other advancements within the organization; therefore, the bully's motivation is to eliminate one's opponent by forcing him or her to leave. Triggering factors that allow bullying practices to evolve are organizational changes such as a change in management, restructuring, or downsizing (Salin, 2003). Triggering factors increase job insecurity, thereby creating a setting where bullying behavior is likely to propagate. The bullying process is dynamic and takes on several different appearances, depending on those involved in it along with the different organizational environments (Salin, 2003). "Enabling structures and processes include conditions that make it possible for bullying to occur in the first place, i.e. factors that provide fertile soil for bullying" (Salin, 2003, p. 1217). Many times, others in the work environment are cognizant of what is going on; however, organizational structures and policies that could be used to circumvent this behavior seem to fail the target (Adams, 1992). "Bullying will only take place if the offender feels he has the blessing, support, or at least the implicit permission by his superiors to behave in this manner" (Einarsen, 1999, p. 21). Toxic leadership styles such as tyrannical combined with a laissez-faire management approach may contribute to bullying, or suggest that workplace aggression is acceptable behavior (Hoel & Salin, 2003).

Salin's (2003) model for bullying behavior can be understood through interaction involving the three groups of factors discussed above. Workplace bullying appears to prosper in organizations where new managers are introduced into an organizational culture that accepts bullying tactics as normal and a suitable way to get the job done (Salin, 2003). Additionally, bullying behavior tends to become exacerbated when higher management abandons responsibility by not intervening when necessary (Brodsky 1976; Salin, 2003). Björkqvist, et al. (1994) argue that organizational leaders hesitate to admit that aggressive behaviors exist in their workplace, since it may be viewed as demonstrating incompetent management abilities.

Heinz Leymann (1996), who has been influential in many European countries advocates that organizational factors relating to leadership, work design, management, and worker morale are the main factors that impact workplace bullying. Leymann (1996) also asserts, "It should be in the employer's interest to establish a policy in preventing conflicts from escalating into dangerous states" (p. 180). Managers who are in charge should be obligated to protect individuals who are targets of aggression. Organizations who allow targeted employees to journey through a bullying process "should be classified as a major management failure" (Leymann, 1996, p. 180). Conflict management is an organizational issue and not an individual one. It is the organization's responsibility to establish policies to prevent conflicts from escalating into mobbing activities (Leymann, 1996).

Yamada (2000) argues that "the presence or absence of a union bears a strong relationship to conditions that promote or deter abusive treatment of workers" (p. 488). Union membership in the U.S. declined dramatically toward the end of the 20th century.

Labor unions do not guarantee a bully-free workplace; however, unions are able to negotiate with management on benefits, compensation, working conditions, and are also a helpful “safety valve” to settle disputes created by abusive managers (Yamada, 2000, p. 489). According to Holley, Jennings, and Wolters (2008), union suppression is a strategy used by managers to prevent unions from coming in, or to eliminate existing labor unions. Holley et al. (2008) proposed that under union suppression, organizations may commit illegal acts and unfair labor practices or file for bankruptcy protection in order to have a union-free workplace.

Although abusive behavior is considered harmful to employees and employers, workplace bullying directed to the workforce in general is not illegal in the U.S. (Yamato, 2000) and workers who are tormented in a “demeaning or insulting pattern” are not protected by the law in the United States (Vega & Comer, 2005, p. 103). Typically, if a targeted individual complains to management, the employee is likely to be labeled as “hyper-sensitive, a trouble maker, or unable to take a joke” (Vega & Comer, 2005, p. 103). Without the protection of laws to deter aggressive behaviors in the workplace, organizations are faced with costs associated with workplace bullying in three areas: 1) replacing employees who leave as a result of being bullied, 2) opportunity costs with witnesses who have to cope with bullying behavior around them, and 3) legal costs to conduct investigations for potential court cases (Rayner & Keashly, 2005).

Target characteristics. Targets of aggression may be found among male and female, young and old, and from all types of industry segments and all organizational levels (Mikkelsen & Einarsen, 2002). “Bullying research has revealed that bullies seem to be male more often than female, and supervisors and managers more often than

colleagues” (Zapf & Einarsen, 2003, p. 168). The imbalance of power between the bully and the target, whether it is real or perceived, causes the target to be particularly vulnerable (Einarsen, 1999). In addition, research has concluded that exposure to bullying results in severe stress with devastating effects on health and well-being (Mikkelsen & Einarsen, 2002).

Namie and Namie (2000) suggest that the targeted employee fits into one of three profiles: First, “nice people” are viewed by the perpetrator as being unlikely “to confront or to stop them” (p. 41). Second, “vulnerable people” convey a general lack of confidence through their words and actions that make the target an easy prey; the bully assumes the targets will not defend themselves when attacked (p. 44). Third, “bright, creative, self assured” people are a threat to the bully who “work hard to undermine them” (p. 41).

Keashly, Trott, and MacLean (1994) found in a study among students that “exposure to abusive behavior was familiar, was relatively frequent, and had a negative impact on the targets” (p. 341). Young employees with low seniority, such as university students, are typically at the bottom of the workplace hierarchy and may be a high risk for being targeted by bullying behavior (Keashly, Trott & MacLean, 1994).

Based on criminal victimology research, Elias (1986) identified three primary sources of victimization: offender characteristics, situational forces and victim precipitation. Elias (1986) noted that some people have a propensity to being victimized by provoking hostility from prospective perpetrators. Drawing from research on childhood bullying, Olweus (1978) referred to these individuals as *provocative victims*. Targeted individuals tend to have had previous experiences of bullying behaviors on the

playground and also within their organizations (Coyne, Seigne, & Randall, 2000; Matthiesen & Einarsen, 2007). Elias (1986) refers to this concept as victim precipitation theory which suggests that targets of aggression play a part in their own victimization.

As discussed earlier, Olweus (1978) found that in studies of bullying among children, the victims who presented themselves as anxious, sensitive, and insecure, which he labeled *submissive victims*, were vulnerable to aggressive behavior because of demonstrating an inability to protect themselves. Aquino and Bradfield (2000) modeled victim precipitation in organizational research using negative affect (NA), which is the disposition for an individual to have a tendency to be anxious, insecure, and fearful. In addition to offender characteristics and victim precipitation, Elias's (1986) crime research further identified situational forces, which were composed of two factors: regulatory failures and structural forces. Regulatory failures are inadequacies in the rules and practices governing the workplace to control crime, and structural forces are economic, social, or bureaucratic situations which encourage aggressive behavior (Elias, 1986). Although regulatory failures and structural forces from literature on crime control, these concepts may be useful in analyzing organizational culture. Many researchers agree that there are four prospective causes of workplace bullying: the organization, the perpetrator, the social work group, and the targeted employee (Einarsen, 1999).

In previous research, targets of bullying have reported being traumatized; however, it is still unknown if the stress symptoms reported are directly or indirectly due to the victim experiencing another distressful life event or as a result of being bullied (Mikkelsen & Einarsen, 2002). Employees who are going through a negative life event such as a family member's death, divorce, bankruptcy, or catastrophic illness, may be at

risk to being vulnerable targets or scapegoats for bullying (Mikkelsen & Einarsen, 2002). Because of these negative life experiences, the distressed employee may violate social norms and attract aggression from other employees. The target's sense of being a competent worker and valued individual is severely negatively affected (Keashly & Jagatic, 2003).

Lutgen-Sandvik, Tracy, and Alberts (2006) propose that employees who witnessed episodes of their co-workers being bullied experienced a reduction in work quality and heightened negativity than did other employees. According to Einarsen et al. (2003), despite the intensity of the situation, managers and co-workers are not likely to intervene to support the target. Harvey et al. (2006) identified a bullying victim that was not consistent with the typical provocative or submissive target. Managers or executives who are both in strong positions may be in competition for power or control within their organizations. Harvey et al. (2006) referred to this competitive relationship as an "elephant fight or the battle of the giants" (p. 7) that occurs when two opponents battle for control over the workplace. The victim is the loser of the fight, and will be continually bullied by the opponent if he/she chooses to stay with the organization.

Targets of aggression feel "heightened levels of anxiety, depression, burnout, frustration, helplessness, negative emotions such as anger, resentment, and fear, difficulty concentrating and lowered self-esteem and self-efficacy" (Keashly & Neuman, 2005, p. 335). Leymann (1996) argues that the target's behavior is a normal response to an abnormal situation. Researchers have also proposed that some victims suffer from PTSD (Post-traumatic stress disorder) when the targets re-experience emotional trauma in dreams or flashbacks after being exposed to cues that resemble the event (Leymann,

1990, 1996; Mikkelsen & Einarsen, 2002). PTSD is typically a reaction to a single event (Keashly & Neuman, 2005). However, British researchers Scott and Stradling (2001) have applied the term Prolonged Duress Stress Disorder (PDSD) to effects of persistent long-term exposure to work related stress.

Diversity. Another factor that may precipitate workplace bullying is the presence in the workforce of minority groups whose presence is resented by bigoted individuals. Many times, employees respond negatively to increased diversity. In the U.S., organizations are feeling the pressures of accommodating a diverse workforce composed of a variety of cultures and backgrounds. Title VII laws of the Civil Rights Act of 1964 protects individuals who fall under a protected class from discrimination and sexual harassment. Neuman and Baron (1998) found that “the greater the increase in diversity in their workplaces reported by individuals, the greater the workplace aggression they reported witnessing and experiencing” (p. 403). Diversity in the workplace may influence the choice of targets who may also be victims of prejudice. Minorities or outside groups may be considered weak or unlikely to retaliate when aggressive behaviors are received.

According to social identity theorists Tajfel and Turner (1979), individuals may be attracted to those who are similar to themselves, depending on their perceived beliefs of similarity as defined by society. Social identity theory (Tajfel & Turner, 1979), suggests that people tend to classify themselves and others according to some prominent characteristics, of which demographics and work profiles play a large part. Being different may cause others to see the person as an outsider and not part of the group. In

certain situations, social identity theory argues that this may lead to misdirected aggression toward the person who is viewed as the outsider (Tajfel & Turner, 1979).

Various groups who have experienced the frustration of racism and oppression may also play a part in their own victimization as a result of their culture. D'Cruz and Noronha's (2006) research on call center agents in India reported that many times *Indian* call center agents were met with rudeness and verbal abuse from American customers when the callers discovered they were speaking to an *Indian*. The agents endured irritating criticism from the Americans about outsourcing and complaints of stealing jobs in the U.S.A. (D'Cruz & Noronha, 2006).

Empirical review. Harvey and Keashly (2003) examined the relationships among the amount of time employees spent at work, job risk factors, and victim characteristics as a predictor of workplace aggression. The study explored length of time spent at work and increased episodes of aggression. Handling firearms, supervising subordinates, and working with items of value such as cash or jewelry are considered job risk factors that many employees deal with on a day-to-day basis. Victims with low self-esteem who are often viewed as vulnerable by others were examined as possible targets of aggression. The study explored victims with low self-esteem to determine if these employees were more often reported as targeted by bullies (Harvey & Keashly, 2003). A sampling plan included 115 respondents who were undergraduate Business Administration students. The mean age was 21.5 years and 47% of the respondents were female. To measure aggression, the researchers used 52 of the 60-item WAR-Q (Neuman & Keashly, 2003). The internal consistency reliability reported by the researchers for this sample was .89. The items were rated on a 7-point scale ranging from

(1) *never* to (7) *daily occurrence* of aggressive behavior. The mean frequency was calculated with higher scores indicating greater frequency of exposure to aggressive behavior. The WAR-Q also requested respondents to indicate the main actor who was the perpetrator for each reported act of aggression; however, this information was not used in this study (Harvey & Keashly, 2003). To measure self-esteem, Rosenberg's (1965) 10-item self-esteem measure was used. The items were rated on a 5-point scale ranging from 1) *strongly disagree* to 5) *strongly agree*. The internal consistency reliability reported by the researchers for this sample was .86. The mean for the 10 items was used as a measure for self-esteem, with higher scores indicating higher levels of self-esteem.

To measure length of time at work, a single item asked respondents to indicate the average number of hours worked per week over the summer. The mean for this sample was 39.6 hours worked per week, with a standard deviation of 10.4 hours. Five to 68 hours per week was the range. Job risk factors were measured using LeBlanc and Kelloway's (2002) 28-item scale. Respondents were requested to rate each item on a five-point scale ranging from 0) *never* to 4) *always* how often they were in a position that involves any of the listed risk factors. The mean of these items was used as a measurement of risk, with higher scores indicating higher risk jobs. The internal consistency for this scale was .85.

To analyze the data, the researchers conducted a hierarchical multiple regression analysis with demographic variables entered first, then self-esteem and job risk factors followed by the hours of work variables. Findings revealed, as the researchers had predicted, self-esteem, job risk factors and hours of work were all significantly related to

aggression. Hours at work significantly accounted for reported aggression which suggested that increased time at work contributed to higher levels of aggression. Students who worked in jobs with higher risk factors and students with lower self-esteem reported higher levels of aggression as well. Hours at work were particularly correlated with aggression and not with the other variables (Harvey & Keashly, 2003). According to Harvey and Keashly (2003), "time at work accounted for a full 8% variance in aggression, competitive in relative terms to each prior predictor" (p. 812). Harvey and Keashly (2003) suggested that future research should explore the effects of fatigue and frustration among different occupations, since requiring employees to work increased hours may trigger aggressive behaviors toward one another. High-risk occupations may have a propensity for higher aggressive behaviors than other occupations. The researchers recommended that future studies explore the underlying reasons for this relationship within a larger range of jobs and occupations.

The strengths of this study were in the testing of propositions which resulted in a high level of data quality and data analysis with clearly defined procedures. The researchers identified the most important limitation as being the fact that the study examined student summer employment, which may not be commensurate with other work experiences. However, the findings in this study were consistent with LeBlanc and Kelloway's (2002) study that used traditional adult working samples.

Matthiesen and Einarsen (2007) examined whether targets and perpetrators of workplace bullying exhibit specific personality traits in a cross-sectional survey study among Norwegian labor union members. The researchers also explored the number of provocative victims within the group of self-reported targets. In addition, the study

analyzed the number of self-reported perpetrators of workplace bullying between a sample of managers and workers. Lastly, micropolitical behavior which is measured by role stress and role ambiguity was examined in workplaces where bullying behavior thrives. Four hypotheses were examined in this study:

- H1: Provocative victims will report a longer prior acquaintance with bullying compared to other victims, be it in (a) former job(s) or (b) in their childhood. Provocative victims will also (c) report more childhood experiences as perpetrators of bullying.
- H2: Perpetrators of bullying will report high levels of aggression, a high but unstable level of self-esteem, and a low level of social competence.
- H3: Provocative victims will report a low level of self-esteem, combined with a high level of aggressiveness and low level of social competence. Targets of bullying will report a low level of self-esteem combined with a low level of social competence.
- H4: Targets of bullying, as well as provocative victims and perpetrators, will report an elevated level of role conflict and role ambiguity.

A randomly selected sampling plan resulted in 4,742 participants drawn from a total population of 10,616 Norwegian labor union members and employers' representatives. The sampling plan resulted in a 47% response rate. Of the total sample, 53% were men and 47% were women. The ages were between 16 and 70 with a mean age of 38 years (SD = 11.9). The questionnaire consisted of employee demographic variables, health-related variables, psychological traits, workplace bullying and harassment, and work environment quality. To measure workplace bullying, 3 questions were provided to measure bullying during the last six months as well as previous exposure to bullying in the respondent's current job and prior jobs. A definition of bullying was provided beforehand. The participants were also asked if they had bullied others at work. These respondents were classified as either perpetrators of bullying or

provocative victims, which are those who have been both targets and perpetrators (Olweus, 1978). Two questions addressed respondents' experiences of childhood bullying, either as a target or perpetrator. Lastly, two additional questions identified earlier experiences of workplace bullying.

In addition to the single questions on bullying, the Negative Acts Questionnaire (NAQ) and Bergen Bullying Index were given to the participants (Einarsen & Raknes, 1997; Einarsen, Raknes, & Matthiesen, 1994). The NAQ contains 18 items measuring bullying behavior and provides four responses: *daily*, *weekly*, *sometimes*, and *never*. Cronbach's alpha for the NAQ was .86, which provided high internal validity. The Bergen Bullying Index consists of five items and was used to measure organizational and individual effects of workplace bullying. Each item was scored on a four-point Likert scale from *agree strongly* to *disagree strongly*. Cronbach's alpha for the Bergen Bullying Index was 0.82.

To measure personality traits, three measures of aggressive tendencies were adopted from Olweus's (1991) research on schoolyard bullying. Three items measured aggression after provocation, resulting in a Cronbach's alpha of 0.76. Two items measured aggression against superiors with a Cronbach's alpha of 0.52. Three items measured aggression against peers resulting in a Cronbach's alpha of 0.70. To measure self-esteem, six items from Alsaker and Olweus's (1986) scale was included in this study resulting in a Cronbach's alpha of 0.84. Alsaker and Olweus's (1986) four item measure of social anxiety scale was also used to measure incompetence and anxiety in social settings, resulting in a Cronbach's alpha of 0.73. Altogether, there were twenty-five items which measured personality traits for participants to describe themselves. There

were six response categories, ranging from 1) *agree completely* to 6) *disagree completely*. To measure role conflict and role ambiguity, two scales developed by Rizzo, House, and Lirzman (1970) were used. Eight items measured role conflict which assessed employee's contradictory expectations and demands on the job. Six items measured role ambiguity, which assessed employee's unclear job expectations. Both scales were scored on a seven-point Likert scale ranging from *totally agree* to *totally disagree*. Cronbach's alpha for role conflict scale was found to be 0.78 and 0.81 for role ambiguity. To analyze the four hypotheses, one-way ANOVA, reliability analysis with Cronbach's alpha, cross-tab analysis for categorical data, and frequency statistics were conducted.

Matthiesen and Einarsen (2007) found that 8% of the sample was exposed to workplace bullying and 2% were identified as provocative victims. Approximately 5% of the participants acknowledged that they acted as perpetrators. Of the total respondents, approximately one in ten individuals were found to be victims of workplace bullying, while one in twenty identified themselves as perpetrators of bullying. Males represented 78% of provocative victims and 78% of perpetrators. Participants who had no experiences of bullying ($n = 1,838$), were the comparison group.

For Hypothesis 1, Matthiesen and Einarsen (2007) found that 32% of the provocative victims admitted that they had been bullied earlier in their careers in previous workplaces, which was higher than the targets of bullying and bullies groups. Seventeen percent of targeted individuals reported being bullied earlier in their careers in previous workplaces, while the perpetrator and the comparison group reported 10% and 5% respectively. The provocative victim group resulted in 48% as being bullied in childhood, while the target group reported 27%, and the comparison group reported 19%.

As children, 45% of the provocative victims group admitted they bullied other children, while the perpetrators reported 38% and targets reported 14%. Findings supported the results for Hypothesis 1 that provocative victims reported more previous experiences as targets of bullying, either in previous jobs or as children, compared to other victims.

Matthiesen and Einarsen (2007) found for Hypothesis 2 that perpetrators identified themselves as significantly higher on aggressiveness than the targets, and provocative victims. Two out of three LSD post hoc tests were significant. In contrast, the perpetrators revealed higher levels of aggression against superiors than either the targets or provocative victims. The provocative victims scored higher levels of aggression against peers than the perpetrator group, the bullied victims group, and the comparison group. Matthiesen and Einarsen (2007) found that the perpetrator group reported higher levels of self-esteem $M = 2.28$, (lack of self-esteem scores), while the target group reported $M = 2.67$, and the provocative group reported $M = 2.75$. Those individuals who were not victims of bullying (the comparison group) reported the highest level of self-esteem, which was $M = 2.19$ (lack of self-esteem score). Hypothesis 2 was only partially verified, since only one of the perpetrator groups, the provocative victim group, reported higher levels of instability with self-esteem.

For Hypothesis 3 Matthiesen and Einarsen (2007) found that provocative victims scored lower on self-esteem $M = 2.75$ and social competency $M = 2.67$, than the target group $M = 2.67$ and $M = 2.53$, and the comparison group $M = 2.19$ and $M = 2.40$. Findings revealed that provocative victims as targets scored lower self-esteem and social competency than the comparison group (those who were not victims of bullying). Provocative victims also reported higher aggression than targets, and also more than the

comparison group. Additionally, provocative victims scored higher in aggression against their friends in contrast to perpetrators. Findings supported Hypothesis 3.

Matthiesen and Einarsen (2007) found for Hypothesis 4 using one-way ANOVA statistics, significant differences between the four samples (targets, provocative victims, perpetrators, and comparison group) for role conflict and role ambiguity. The three bullying groups (targets, provocative victims, and perpetrators) scored higher levels of role stress compared to the comparison group. Targets and provocative victims were found to have higher levels of role conflict $M = 3.88$ and $M = 3.68$ than the perpetrators $M = 3.25$ and the comparison group $M = 2.81$. Group differences for role ambiguity were similar, with targets and provocative victims reporting $M = 3.01$ and $M = 3.24$ in contrast to the perpetrators and comparison group $M = 2.72$ and $M = 2.56$. Findings supported Hypotheses 4.

According to Matthiesen and Einarsen (2007), these findings were consistent with previous research. The targeted group as well as the provocative victim group reported prior experiences of childhood bullying as well as in former jobs. Almost one out of two provocative victims had had experiences in their childhood as perpetrators. Perpetrators revealed stronger aggressive reactions after being provoked in the workplace than the other groups. Findings also revealed that targets and provocative victims reported a lower level of self-esteem and social competency than did the perpetrators. The strengths of the study were in hypotheses testing of propositions which resulted in a high level of data quality and data analysis. The researchers presented comprehensible and succinct statistical methods with validity of the scales.

The limitations to the study identified by the researchers were in the self-report survey method which asked participants to reveal sensitive issues such as either admitting to being a perpetrator, target, or a provocative victim. According to the researchers, perpetrators may not admit to aggressive acts because of social acceptance pressures and may refuse to reveal they are workplace bullies. Matthiesen and Einarsen (2007) suggested that since previous research focused on the targeted victim, and very little on the provocative victim, future research exploring provocative victims is warranted. In addition, future research on perpetrators of workplace bullying, from a different perspective than the target, is also an area for further evaluation.

Skogstad, Matthiesen, and Einarsen (2007) investigated direct and indirect relationships between organizational changes and workplace bullying among Norwegian workers. The researchers explored how changes in the work environment such as downsizing, budget cuts, management changes, restructuring, mergers and acquisitions, may result in interpersonal conflicts that can escalate to aggression if not resolved. Managers who are elected the task of communicating and implementing change may take on a tyrannical leadership style, which could be responsible for aggressive conflicts with workers. Four hypotheses were tested in this study:

- H1: There will be positive associations between experiences of different organizational changes and exposure to bullying at work.
- H2: The number of organizational changes taking place during the last 12 months will be positively associated with exposure to bullying at work.
- H3: Organizational changes have direct as well as indirect effects on exposure to bullying at work, with interpersonal conflicts with immediate superior and with co-workers as mediating factors.
- H4: Interpersonal conflicts with one's immediate superior are a stronger mediator than are interpersonal conflicts with co-workers.

A randomly selected sampling plan resulted in 2,408 participants for this study. The sample was taken from a total population of 4,500 employees from The Norwegian Central Employee Register by Statistics Norway (SSB), which registers all employed workers. The sample included 52% women and 48% men with an age range of 19 to 66 years. The mean age was 43.76 years (s.d. = 11.33), while the mean seniority was 11.0 years (s.d. = 10.33). Questionnaires were mailed to all participants resulting in a return of 2,539 completed surveys. Respondents who reported being disabled, on pensions, unemployed, or retired were not included, which resulted in a final sample of 57%, or 2,408 participants. The questionnaire in the study consisted of employee demographic variables, organizational changes, interpersonal conflicts, and exposure to workplace bullying behaviors.

To measure organizational changes, a culturally modified version of Baron and Neuman's (1996, 1998) scale was used. Skogstad et al. (2007) requested participants to respond to thirteen items which measured organizational changes such as downsizing, salary reductions, and changes in system technologies. Four responses were provided: *never*, *to a small degree*, *to some degree*, and *to a high degree*. Cronbach's alpha measuring internal consistency was .84. Four items measured interpersonal conflicts with questions measuring task-oriented conflicts, person-oriented conflicts, and conflicts with superiors and co-workers. An introduction was given prior to the questions referring to conflicts at work and participants were requested to select from five responses: *to a high degree in conflict*, *to a small degree in conflict*, *to some degree in conflict*, *to a small degree in conflict* and *not in conflict*. The researchers did not identify reliability data of the interpersonal conflict measures. To measure exposure to workplace bullying, the

researchers used the NAQ-R (Einarsen & Hoel, 2001) which contains 22 items made up of behavioral terms without any reference to workplace bullying behavior. There were five response categories asking the participants to indicate the frequency of the behavior on their job during the last six months. The categories were: *never, now and then, about monthly, about weekly, and about daily*. Cronbach's alpha measuring internal consistency was .90. To analyze the four hypotheses SPSS version 13.0 was used to conduct frequency analyses, descriptive statistics, reliability analyses, correlation analyses, ANOVA, exploratory factor analyses, and regression analyses. Amos 6.0 statistical program was also used to conduct Structural Equation Modeling (SEM).

In order to test Hypothesis 1, the researchers conducted Pearson's product-moment correlations to analyze whether positive associations exist between experiences of different organizational changes and bullying. A two-tailed test was used for all correlations to test significance. The researchers found that the strongest correlation was between task-related bullying and work environment changes ($r = .30, p < .01$). Findings also provided significant correlations among the three change factors and supervisory/co-worker conflicts were modest to small (if r is between .44 and .49, $p < .01$). SEM supported the hypothesis that organizational changes are directly related to workplace bullying. In conclusion, the correlation and regression analysis support H1, that organizational changes increase the likelihood of being exposed to workplace bullying.

In order to test Hypothesis 2, the researchers conducted a hierarchical regression analysis to evaluate whether the number of organizational changes that took place during the previous 12 months was positively associated with exposure to bullying at work. The researchers found that the results of the regression analysis provide "some support for the

notion that the number of organizational changes taking place during the last 12 months is correlated positively to exposure to person-related bullying” (Skogstad et al., 2007, p. 74). Thus, Hypothesis 2 was supported.

SEM (Structural Equation Modeling) supported Hypothesis 3 that organizational changes are directly related to workplace bullying. The effects of organizational changes mediated by conflicts with the employee’s immediate superior were supported to a very limited extent. By contrast, results provided almost no mediation effect for conflicts with co-workers. In summary, results provided that organizational changes and interpersonal conflicts are independent antecedents of workplace bullying. “Organizational changes significantly predict both bullying and interpersonal conflicts” (Skogstad et al., 2007, p. 78).

To test Hypothesis 4, SEM found that the effects of organizational changes mediated by conflicts with the employee’s immediate superior were supported to a very limited extent. Results provided almost no mediation effect for conflicts with co-workers. Hypothesis 4 was only partially supported. However, results did indicate that “organizational changes significantly predict both bullying and interpersonal conflicts” (Skogstad et al., 2007, p. 78).

Although the researchers found that a pattern of organizational changes was positively correlated with workplace bullying, the relationship between changes and person-related bullying was moderate. As a single item, organizational changes effecting pay reductions and salary freezes showed a higher effect on bullying behavior than did downsizing and reductions in personnel. The study’s strengths were in testing hypotheses which resulted in a high level of data analysis. The researchers presented

comprehensible and succinct statistical methods. The limitations to the study identified by the researchers were in the cross-sectional design of the study, which presented a weak design for making causal inferences. The researchers suggested that cross-sectional relationships can only be better analyzed through a longitudinal study because of a variety of reciprocal relationships of the design. The study was also representative solely of Norwegian workers and not any other population sample from other organizations which may have presented different results. Although Skogstad et al. (2007) explored the negative effects of organizational changes; the study did not identify effects of positive organizational changes. In addition, the participants were asked to respond to organizational changes within the last twelve months, which may have influenced their responses, since they were aware of both positive and negative consequences of organizational changes (Skogstad et al., 2007).

Organizational Justice

Theoretical review. Employees are met with organizational justice in a variety of ways within the workplace environment. Concerns about fairness with salary, promotions, outcomes of disputes, treatment by authority figures, and interpersonal relations with other employees are considered forms of organizational justice (Greenberg & Colquitt, 2005). Organizational justice encompasses how employees evaluate whether they have been fairly or unfairly treated in their workplace environment and how those evaluations affect other work related functions (Moorman, 1991). Adam's (1965) equity theory proposes that workers make every effort to preserve fairness between their job's inputs and outputs they receive compared to their perceptions of other workers' inputs and outputs. Equity theory suggests that employees who perceive themselves as either

under-compensated or over-compensated will experience distress, and this distress will lead to efforts to bring fairness to the situation (Adams, 1965). Employees who perceive the ratio of their inputs and outcomes as comparable to other employees' inputs and outcomes will consider that he or she is treated justly (Adams, 1965). When employees feel they are being treated fairly they are considered to be more positive about their employment, their work outcomes, and their superiors (Moorman, 1991). According to Neuman and Baron (2003), employees who perceive injustices resulting from norm violations in the workplace environment may feel frustrated which in turn may "elicit retaliation or predispose individuals towards aggression and bullying" (p. 186).

Workers tend to evaluate organizational justice within four classifications of experiences: the outcomes resulting from policies or processes (procedural justice), the outcomes employees receive based on their contribution to the organization (distributive justice), the manner in how courteously and politely managers and coworkers treat the employee (interpersonal justice), and the communications employees receive from authority figures in explaining procedures (informational justice) (Colquitt, 2001). Employee perceptions of fair treatment result in increased job satisfaction, enhanced motivation, and organizational commitment (Konovsky, 2000; Vroom, 1964). Conversely, unfair treatment has been found to result in employee retaliatory behaviors in the workplace environment (Skarlicki & Latham, 1997; Konovsky, 2000). Employees who perceive feelings of injustice may also experience decreased loyalty to their organizations (Tyler & Lind, 1992).

Procedural justice. Procedural justice relates to the fairness of official organizational decision making policies. Thibault and Walker (1975) introduced a model

that differentiated procedural justice from distributive justice by proposing that individuals wish their voices to be heard when decisions are made involving methods, policies, and procedures in order to result in the most favorable outcome. Leventhal (1980) expanded on Thibault and Walker's (1975) procedural justice model and introduced a model with six rules to evaluate the fairness of a procedure. In his model, Leventhal (1980) proposed that procedural rules are evaluated by an individual's personal belief system that procedures dispersed from authority figures are just and suitable. Leventhal's (1980) six justice rules defining criteria necessary to satisfy fairness of procedures are as follows: 1) apply consistently across people and across time, 2) are free from bias, 3) ensure access to accurate information when making decisions, 4) have a method in place to correct improper decisions, 5) ensure that opinions of groups affected by the decisions have been taken into account, and 6) ensure ethicality.

Distributive justice. Distributive justice was derived from Adam's (1965) equity theory. Leventhal (1980) proposed that distributive justice is evaluated by an individual's perception that rewards, penalties, and resources are fairly disbursed based on specific criteria. According to Leventhal (1980), specific criteria may be comparing rewards to efforts, or rewards to necessities, or disbursing rewards equitably. An individual's perception of distributive fairness is influenced after evaluating whether efforts or contributions, needs or necessities, and equality have been met.

Interpersonal justice. Bies and Moag (1986) propose that perceptions of procedural justice begin with an organization's procedures and the way those procedures are implemented. In 1986 Bies and Moag introduced *interactional justice* which consists of two types of interpersonal behavior: interpersonal justice and informational justice.

Interpersonal justice is concerned with the fair treatment by others such as politeness, dignity, and respect from individuals in authority responsible for executing procedures or determining outcomes. Truthfulness, courtesy, respect for the individual's rights and justification of decisions made demonstrate fair treatment (Bies & Moag, 1986).

Informational justice. Informational justice relates to explanations provided by those in authority about why procedures were carried out or why the outcomes were distributed in a specific manner (Bies & Moag, 1986). The earliest research on informational justice took place in a study by Brockner, DeWitt, Grover, and Reed (1990), who found that layoffs are better received by departing employees when a thorough explanation for the layoff was given. Informational justice refers to the quantity of information necessary to satisfy the individual's perceptions of justice when decisions are made on their behalf (Greenberg, 1993).

Greenberg (1993) proposed a four-factor organizational justice model: distributive, procedural, informational, and interpersonal justice. Informational justice was once a feature of interactional justice, which was the social determinant of procedural justice (Greenberg, 1993). Interpersonal justice was the other feature of interactional justice, which was the social characteristic of distributive justice (Greenberg, 1993). Colquitt (2001) designed a justice measure utilizing the four justice factors: distributive justice, procedural justice, informational justice, and interpersonal justice, to explore dimensionality and construct validation. Colquitt's (2001) instrument was designed to investigate the theoretical dimensions of organizational justice and also to test the construct validity of a new justice measure. The 20-item survey was taken from the theoretical origins grounded in the seminal works of organizational justice

literature, procedural justice, distributive justice, interpersonal justice, and informational justice (Colquitt, 2001). Conducting two separate studies, the results supported organizational justice to be conceptualized as four dimensions: distributive, procedural, informational, and interpersonal justice (Colquitt, 2001). The evidence for construct validity of the organizational justice scale was provided by confirmatory factor analysis. According to Colquitt (2001), the good fit of the structural model along with the statistical significance of its paths suggest adequate predictive validity.

Empirical review. Tepper, Duffy, Henle, and Lambert (2006) conducted a field study among National Guard members and their military supervisors to evaluate antecedents for abusive supervision. The research study explored whether the supervisor's depression resulting from their workplace environment, mediates the relationship between supervisor's procedural justice and subordinates' perceptions of their supervisor's abusiveness. The researchers also explored whether the abusiveness was higher if the subordinates were higher in negative affectivity (NA), which are those individuals who present themselves as being anxious, distressed, and easily targeted (Tepper, et al., 2006). The sole hypothesis being tested was:

The strength of the mediated relationship between supervisors' procedural justice and subordinates' perceptions that they have been abused (through) supervisor's depression will depend on subordinate's NA; the indirect effect of supervisor's procedural justice will be stronger when subordinates are higher in NA (Tepper, et al., 2006, p. 106).

A sampling plan of 2,042 soldiers completing the subordinate survey and 518 military leaders completing the supervisor survey produced a usable sample of 334 dyads from 250 military groups (166 supervisor-subordinate dyads and 84 triads consisting of one supervisor-two subordinates). Ninety-six percent of the supervisors were male and

their median age was between 30 and 39 years. Ninety-three percent of the subordinates were male and their median age was between 25 and 29 years. The participants were from a variety of sectors within the National Guard. The supervisors' survey contained measures of procedural justice and depression. The subordinate's survey contained measures of abusive supervision and negative affectivity (NA).

To measure abusive supervision, subordinates completed a 14-item measure developed by Zellars, Tepper, and Duffy (2002). A 5-point response scale ranging from 1 = *never* to 5 = *frequently, if not always*, to indicate how often supervisors are abusive. The researchers did not indicate reliability and validity of the scale. Negative affectivity (NA) was measured using four items from the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). A 5-point scale ranging from 1 = *not at all* to 5 = *extremely*, was used to report the extent to which the subordinate felt distressed or upset. Reliability and validity of the scale was not reported by the researchers.

Supervisors completed a 5-item measure of procedural justice that was developed by Moorman (1991) and was adapted for use with the National Guard. A 5-point scale ranging from 1 = *strongly disagree* to 5 = *strongly agree* was used to respond to items such as "my organization makes decisions in an unbiased manner" (Tepper, et al., 2006, p. 107). Reliability and validity of the scale was not reported by the researchers. Supervisors' depression was measured by the seven-item NIMH Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). Responses ranged from 1 = *never* to 5 = *frequently*, with higher scores representing higher levels of depression. Reliability and validity of the CES-D scale was not reported by the researchers.

Confirmatory factor analysis was conducted to assess the dimensionality of the scales. The researchers analyzed the hypothesized model using the framework for testing moderated-mediation models outlined by Edwards and Lambert in 2004 (as cited in Tepper et al., 2006). Findings reported that supervisors who experienced procedural injustices also suffered from depression which resulted in abusive behavior toward subordinates who are high in NA, or those employees who appear to be vulnerable to abuse. The researchers found that their results were consistent with the suggestion that supervisors who were treated unfairly in their workplace environment expressed their anger by abusing their employees “to gain a sense of control, self-worth, and power” (Tepper et al., 2006, p. 104). As a result, the employees then feel treated unjustly. A recommendation from the researchers was for organizations that strive to reduce hostile and aggressive behaviors may need to start with treating their supervisors fairly. Additionally, organizations that refuse to ignore the serious problem of supervisory injustice which results in depression may be faced with increased abuse toward subordinates.

The strengths of this study were in the testing of propositions which resulted in a high level of data quality and data analysis. There were clearly defined procedures. Future studies should provide more validity. The researchers identified the most important limitation in this study was evaluating subordinates with high NA, which triggers abusive behavior from supervisors because the subordinates may be unpleasant and not easy to work with. In contrast, employees with high NA versus employees with lower NA may be more willing to recollect objectionable supervisory behavior because of their anxious persona. Tepper et al. (2006) suggested that future research should

explore the offender's character traits such as stress and anger, along with victim's traits such as being submissive or provocative.

Loi, Hang-yue, and Foley (2006) examined the relationships among law firm attorneys' organizational justice perceptions, perceived organizational support (POS), organizational commitment, and intention to leave. POS refers to the employees belief that they are valued and appreciated by their organization (Eisenberger, Huntington, Hutchison, & Sowa, 1986). The researchers focused on two major types of organizational justice perceptions: distributive justice, which refers to the fairness of outcomes; and procedural justice, which refers to the fairness of procedures used to decide outcomes (Loi et al., 2006). The population sampled for this study was composed of practicing attorneys working in law firms in Hong Kong. The researchers selected the legal field to test the hypotheses, since procedural justice is an important part of the legal system, and law firms and other professional organizations have concerns to stimulate employee organizational commitment. Four hypotheses were analyzed in this study:

- H1a: POS mediates the positive relationship between procedural justice and organizational commitment.
- H1b: POS mediates the positive relationship between distributive justice and organizational commitment.
- H2a: POS mediates the negative relationship between procedural justice and intention to leave.
- H2b: POS mediates the negative relationship between distributive justice and intention to leave.
- H3: Organizational commitment is negatively related to intention to leave.

A sampling plan resulted in a return of 514 completed surveys out of 4,113 mailed questionnaires, representing 12.5 percent. Males represented 55.4 percent and

85.9 percent were Chinese, with an average seniority of 6.1 years. Law partners represented 36.2 percent. The questionnaire utilized a 6-point Likert-type scale, 1 = *strongly disagree* to 6 = *strongly agree*. To measure procedural justice, Moorman's (1991) seven-item measurement was adopted for this study. Cronbach's alpha for this scale was .95. A 5-item scale adopted from Price and Mueller's (1986) distributive justice index was used. Cronbach's alpha was .97. Perceived organizational support was measured by a shorter 6-item version developed by Eisenberger et al. (1986). Cronbach's alpha was .85 for the scale. Organizational commitment was measured by an 8-item scale developed by Allen and Meyer (1990). Cronbach's alpha was .85 for this scale. Intention to leave was measured using a 4-item scale adopted from Rosin and Korabik (1991). Cronbach's alpha was .88. Before testing the hypotheses, the researchers performed confirmatory factor analyses to analyze the measures used in this study. The model fit for the five-factor model (procedural justice, distributive justice, POS, organizational commitment, and intention to leave) was evaluated using LISREL 8.53. A series of hierarchical regression analyses were conducted to examine hypotheses.

Findings revealed that POS has a non-significant effect between procedural justice and organizational commitment, which supported Hypothesis 1a. Additionally, POS was found to have a non-significant effect of distributive justice on organizational commitment, which supports Hypothesis 1b. The relationship between procedural justice and intention to leave was found to be non-significant, which supports Hypothesis 2a. Findings resulted in support of Hypothesis 2b, that POS fully mediated the relationship between distributive justice and intention to leave.

The strengths of this study were in hypotheses testing of propositions which resulted in a high level of data quality and data analysis. There were also clearly defined procedures. A limitation to the study was that turnover intention was investigated but not actual turnover of employees. Future research to conduct a longitudinal study was recommended. Additionally, researchers focused on distributive and procedural justice but did not evaluate the effects of interpersonal and informational justice, which leaves opportunity for future study. Furthermore, since the respondents were limited to attorneys in Hong Kong, generalizability of the findings may not be applicable to other occupations and cultures. Future studies testing the researcher's model with different professions and cultures is recommended.

Andersson-Straberg, Sverke, and Hellgren (2007) examined employees' perceptions of justice relating to pay setting among Swedish nurses. The researchers evaluated how elements in the workplace and factors relating to the pay-setting process influence employees' perceptions of pay justice and whether pay justice mediates the effects on work attitudes and behaviors. Colquitt's (2001) organizational justice scale was utilized to measure four dimensions of justice: distributive, procedural, interpersonal, and informational to analyze pay-related justice.

Although the researchers did not report hypotheses, they identified two research objectives. The first objective was to analyze the importance of work climate perceptions and factors relating to the pay-setting process in influencing employees' perceptions of pay justice (Andersson-Straberg et al., 2007). The second objective was to analyze whether the four types of pay justice (distributive, procedural, interpersonal, and informational) contribute to employee work attitudes and behaviors, such as job

satisfaction, organizational commitment, turnover intention, performance, and pay satisfaction (Andersson-Straberg et al., 2007). Justice perceptions were also tested to analyze whether justice mediates effects of work climate and pay-related factors with employee behaviors and attitudes.

A sampling plan resulted in a return of 539 completed surveys out of 1,190 registered nurses and assistant nurses. The average seniority was 19 years, women represented 88 percent, and the mean age was 48 years. Colquitt's (2001) 20-item organizational justice scale was used to measure pay justice and was adjusted to evaluate justice perceptions to pay. Respondents were requested to rate the pay-setting process on their jobs and to what extent they perceived fairness on a Likert scale (1 = *to a small extent* to 5 = *to a high extent*). Since Colquitt's (2001) scale was never used to evaluate pay justice, the researchers conducted a confirmatory factor analysis. To test for reliability and validity, the researchers followed Hu and Bentler's (1995) model fit, using a combination of tests of absolute, parsimonious, and incremental fit. A chi-square test for the four-factor scale was significant and provided an adequate fit to data. The alpha coefficients for Colquitt's scale reported by the researchers for this study were as follows: distributive justice, 4 items ranging from .83 to .87; procedural justice, 7 items ranging from .63 to .82; interpersonal justice, 4 items ranging from .62 to .94; and informational justice, 5 items ranging from .79 to .88.

The researchers designed twelve items to measure pay-related factors of the survey. Dichotomous, fill-in-the-blank and multiple-choice responses measured pay level, criteria for raise, where performance reviews took place, level of discomfort employees felt about performance assessments, and gender equality. Four different

characteristics of work climate were investigated. Feedback was measured by four items developed by Hackman and Oldham (1975). Autonomy was measured with four items from Sverke and Sjoberg (1994). Goal clarity was measured with four items taken from Caplan, (1971) and from Rizzo, House, & Lirtzman (1970). Workload was measured with four items developed by Beehr, Walsh, and Taber (1976). The researchers did not indicate validity or reliability for the work climate measures.

To measure job satisfaction, three items were adopted from Brayfield and Rothe (1951). Organizational commitment was measured with Allen and Meyer's (1990) eight item affective commitment scale. To measure turnover intention, three items from Sjoberg and Sverke (2000) were used. Performance was evaluated using Hall's (1976) six-item index of perceived work performance. Five items developed by Judge and Welbourne (1994) were used to measure pay satisfaction. The researchers did not report validity or reliability for the work-related attitude and behavior scales used. To ascertain demographic characteristics, five items developed by the researchers measured age, gender, full-time or part-time, occupation, and supervisory status.

In order to analyze the first objective, Andersson-Straberg et al. (2007) conducted a series of hierarchical multiple regression analyses in order to evaluate the importance of work climate and pay-related factors for the four dimensions of justice. Distributive justice scores were higher among women than men and among assistant nurses in comparison to registered nurses while feedback was positive. Workload resulted negatively with distributive justice. Procedural justice scores were higher among younger employees and women, who responded that pay procedures were fairer than the results of older workers and men. Interpersonal justice scores were higher among women

than men. Gender equality, goal clarity and feedback had positive results, while evaluation discomfort resulted in negative scores for interpersonal justice. Informational justice scores resulted positively to gender equality, knowledge of criteria, and participation in performance reviews.

The second research objective was to analyze whether the four dimensions of pay justice influenced employee work attitudes after evaluating demographics, work climate, and pay-related features. Andersson-Straberg et al. (2007) found that women have more job and pay satisfaction and a strong allegiance to their organization, with lower intention to leave. Work climate results were found to be the primary influence of nurses' attitudes and behaviors, while goal clarity and autonomy resulted in positive outcomes, along with workload and feedback.

The researchers found their study to be in alignment with existing literature that interpersonal justice was associated with job satisfaction, resulting in lower employee intention to leave their organization (Colquitt et al., 2001). The strengths of the study were in statistically testing the propositions, which resulted in a high level of data quality and analysis. There were clearly defined procedures. Future studies should provide more validity of the scales used. In addition, the researchers recommended that future studies be conducted with other occupational groups and cultural settings to evaluate employees' perceptions of justice regarding pay (Andersson-Straberg et al., 2007). It was also recommended that Colquitt's (2001) scale be used to evaluate different types of stressors that may affect employee perceptions of organizational justice in other workplace environments.

Intention to Leave

Theoretical review. Vroom's (1964) expectancy theory proposes that employees' behavior is a result of alternative choices made in order to maximize pleasure and minimize pain. In his model, Vroom (1964) suggests that individuals will evaluate the outcomes related to different levels of performance and pursue the level that offers the highest reward. The key components of Vroom's (1964) theory are expectancy, instrumentality, and valence. Expectancy is the "belief concerning the likelihood that a particular act will be followed by a particular outcome" (Vroom, 1964, p. 17). Expectancy also refers to how strongly an employee believes a specific job performance level or goal is attainable. Vroom (1964) defines instrumentality as a probability belief that attaches one outcome such as a high performance level to another outcome such as a reward. Examples of instrumentality are commissioned sales employees whose compensation is intended to fuel performance for the reward of money. Valence refers to the fulfillment level an individual anticipates receiving from an outcome, as opposed to the actual satisfaction received after attaining the reward (Vroom, 1964). Vroom's (1964) expectancy theory suggests that employees enter into organizations with expectations and values and if met, then the employees' are most likely to stay. In Vroom's (1964) model, job satisfaction is reflective of the valence or importance to an individual to remain with his job or leave.

Mobley (1977) theorized that when an employee experiences dissatisfaction on the job, thoughts of quitting and intention to leave "may be the last step prior to actual quitting" (p. 237). In his employee turnover model, Mobley (1977, p. 238) illustrates the turnover decision process beginning with the following:

- a. Evaluation of Existing Job
- b. Experienced Job Satisfaction-Dissatisfaction
- c. Thinking of Quitting
- d. Evaluation of Expected Utility of Search and Cost of Quitting
- e. Intention to Search for Alternatives
- f. Search for Alternatives
- g. Evaluation of Alternatives
- h. Comparison of Alternatives vs. Present Job
- i. Intention to Quit/Stay
- j. Quit/Stay

Steers and Mowday's (1981) model proposes that a sequence of variables lead to an employee leaving or staying with an organization. The first sequence is job expectations and values met followed by affective responses such as job satisfaction, organizational commitment, and job involvement, which influence an employee's intention to stay or leave (Steers & Mowday, 1981).

Mueller and Price (1990) developed an integrated model of turnover which combines elements of sociology, economics, and psychology. In their model, Vroom's (1964) expectancy theory is the primary foundation. Mueller and Price's (1990) model also identifies employee expectations and values met, as well as interaction with three additional variables such as job satisfaction, organizational commitment, and job search behavior. Price (2001) proposes that if new job opportunities found elsewhere do not appear to be better than those with the present employer, the employee will have fewer reasons to consider leaving.

Kim, Price, Mueller, and Watson (1996) designed a four-item, turnover intention scale that was used to examine career goals among physicians at a U.S. Air Force hospital. Intention to leave was measured by the following four items: "I plan to leave the Air Force as soon as possible," "Under no circumstances will I voluntarily leave the Air Force," "I would be reluctant to leave the Air Force," and "I plan to stay in the Air Force as long as possible" (Kim et al., 1996, p. 959). Respondents were requested to select from a five-point Likert scale: 1) *strongly agree*, 2) *agree*, 3) *neither agree nor disagree*, 4) *disagree*, and 5) *strongly disagree* (Kim et al., 1996). In their study, Kim et al. (1996) found reliability resulted in a coefficient alpha of .85. Although the researchers did not present results of factor analysis, "the vast majority of the measures showed discriminant and convergent validity" (Kim, et al., 1996, p. 959).

Previous research has confirmed that intention to leave is one of the paramount predictors to employee turnover (Griffeth, Hom, & Gaertner, 2000; Mobley, Horner, & Hollingsworth, 1978). Turnover costs to replace employees can be expensive to companies. Employee turnover costs can be divided into two categories: *direct costs* include separation, replacement, training, and administrative costs and *indirect costs* such as lower productivity, includes employee morale issues, increased errors, and customer dissatisfaction (Dess & Shaw, 2001). Separation costs consist of exit interviews and termination or retirement costs (Dess & Shaw, 2001). Replacement costs incorporate advertising for job vacancies, costs incurred for employment agencies, and expenses for hiring temporary personnel. Training costs include the time and effort supervisors, training staff, and co-workers take to instruct, mentor, and coach the new employee (Dess & Shaw, 2001).

Two types of employee turnover typically exist: involuntary and voluntary turnover (Hong, Wei, & Chen, 2007). Involuntary turnover is frequently described as movements across organizational boundaries which result in the employee being slightly affected (Price, 1977). Organizational strategies, such as downsizing, firing, or forced retirement are forms of involuntary turnover (Price, 1977; Campion, 1991). Conversely, voluntary turnover is the movement across the boundary of an organization which results in the employee being heavily affected (Price, 1977). Voluntary turnover is represented by higher absenteeism and tardiness when employees begin to withdraw from their organizations (Price, 1977; Campion, 1991).

Individuals who decide to litigate for damages under constructive discharge claims must be able to provide evidence that he or she worked under “unreasonably harsh conditions, much harsher than those confronted by his or her co-workers” (Gregory, 2004, p. 157). In a 2003 survey by the Workplace Bullying and Trauma Institute, the results revealed that 37% of targeted employees were fired or involuntarily terminated, 33% of targets quit, and 17% of targets transferred to another position with the same employer (Namie, 2003). Additionally, when employees leave their jobs, employers not only lose talent and experience, but their competitive advantage is compromised when former employees are hired by the competition (Fugate, Kinicki, & Prussia, 2008).

Empirical review. Yeh (2007) examined turnover intention among accounting professionals in Florida. Individuals within the accounting profession are considered to hold intellectual capital and business acumen through education, specialization, and expertise. The population sampled was composed of masters of accounting students at a

Florida university and CPAs from a professional business fraternity for certified public accountants. Two hypotheses were analyzed in this study:

- H1: Organizational commitment is negatively related to turnover intention among accounting professionals.
- H2: Employee job satisfaction is negatively related to turnover intention among accounting professionals.

A sampling plan resulted in a return of 202 surveys out of 325, or 62.1 percent.

To measure organizational commitment, Yeh (2007) used a revised three-component model of commitment-affective, continuance, and normative commitment scale from Meyer, Allen, and Smith (1993). The validity and reliability were reported by Meyer, et al. (1993) and confirmed by Clugston, Howell, and Dorfman (2000) using confirmatory factor analysis. Reliability reported by Myer, et al. (1993) is as follows: affective commitment, .82; continuance commitment, .74; and normative commitment, .83. Validity was established. Job satisfaction was measured using three items from the general satisfaction scale of the Job Diagnostic Survey (JDS) by Hackman and Oldham (1975). The researcher did not report reliability and validity of the scale. Turnover intentions (TOI) were measured with a three-item instrument by Colarelli (1984). Reliability of the scale's internal consistency alpha was .75 (Colarelli, 1984). Validity of the turnover scale was not reported. Exploratory factor analysis was conducted to ensure uni-dimensionality of the scales in the survey using principal components analysis and a varimax orthogonal rotation with an acceptable Cronbach alpha of 60% or more. The researcher used structural equation modeling (SEM) to test the hypothesized model using an AMOS version 5 program.

The researcher reported that organizational commitment does not influence turnover intention and Hypothesis 1 was not supported. According to Yeh (2007), the results reported contradicted a previous study by Parker and Kohnmeyer III (2005), whose findings indicated that organizational commitment predicts turnover intention, but job satisfaction does not for lower level staff accountants. Findings from structural equation modeling supported Hypothesis 2 that when organizational commitment and job satisfaction are present in the turnover model, job satisfaction is the most important factor in determining employees' intention to leave. Yeh (2007) recommended that organizations differentiate between two types of employees; those with high movement capital and those with low movement capital. Each group responds to organizational commitment and job satisfaction differently regarding intention to leave.

The strengths of this study were in the hypotheses testing of propositions, resulting in a high level of data quality and data analysis. There were also clearly defined procedures. Future studies should provide more validity. The researcher observed that this study was limited to data from a specialized service industry and results may not apply to non-service type of professions. Additionally, Yeh (2007) suggested that studies examining various types of workers from different industry sectors are necessary to evaluate organizational commitment for future turnover research.

Djurkovic, McCormack, and Casimir (2004) examined the physical and psychological effects of workplace bullying and their relationship to intention to leave among 150 undergraduate business and economic students. The students were from a university in Melbourne, Australia and were employed while pursuing their studies. A sampling plan returned 150 useable questionnaires which represented a response rate of

18 percent. The average age of the participants was 22 years. The population sample resulted in 66 males, representing 44 percent, and 84 females, representing 56 percent. The students were employed in a variety of industries and the sample was reasonably representative of the student population. The researchers tested four hypotheses:

- H1: Workplace bullies are higher up the organizational hierarchy than their victims.
- H2a: Workplace bullies are more likely to be male.
- H2b: In instances where the bully is male, the target is more likely to be a male, and in instances where the bully is female, the target is more likely to be female.
- H3a: Workplace bullying is positively correlated with negative affect.
- H3b: Workplace bullying is positively correlated with physical symptoms.
- H4: Workplace bullying is positively correlated with intention to leave.

The students who agreed to participate in the study were given a questionnaire which was based on Quine's (1999) study of workplace bullying in the U.K. National Health Service, and was modified to suit the current study. Twenty forms of bullying behavior were taken from the literature, representing each of the five categories presented by Rayner and Hoel (1997), which were: 1) Threat to professional status (publicly humiliating the victim and accusation of lack of effort), 2) Threat to personal standing (name calling and insults), 3) Isolation (preventing access to opportunities and withholding information required for the target's work), 4) Overwork (undue pressure to produce work and setting impossible deadlines), and 5) Destabilization (failing to give credit when due and setting up the victim for failure). Respondents were requested to indicate using a 5-point Likert scale (0 = not at all to 4 = frequently, if not always) if they had been subjected to bullying behaviors within the past 12 months. To measure

hierarchical status, the students were asked to identify their job level in contrast to the perpetrator, and also to indicate whether or not the perpetrator had authority to fire them. The respondents were also asked to identify the gender of the perpetrator. In the final portion of the survey, the students were asked whether they suffered symptoms resulting from the bullying behavior. Negative affect (NA), which includes depression and anxiety, was measured by five items. Physical ailments such as headaches and digestive disorders were measured by seven items. A five-point Likert scale (0 = Not at all to 4 = frequently, if not always) was used to measure symptoms suffered. Using the same five-point Likert scale, the respondents were asked how often over the past 12 months they had contemplated leaving their jobs as a result of being mistreated. In order to avoid biasing the study's results, the researchers labeled the anonymous questionnaire "Workplace Behavior in Australia" (Djurkovic, et al., 2004, p. 480). The researchers did not report validity and reliability of the scales used.

Confirmatory factor analyses was conducted on Quine's (1999) scale, utilizing AMOS 4 and SPSS to evaluate the twenty items and measure five subscales of workplace bullying. A chi-square goodness of fit test was used to examine Hypothesis 1, which resulted in supporting a finding that bullies are likely to be higher in the organizational hierarchy than their victims. To examine the influence of gender on workplace bullying for Hypothesis 2a, a chi-square goodness of fit test resulted in a finding that bullies were not more likely to be male than female. Hypothesis 2a was not supported. A chi-square contingency test supported Hypothesis 2b that proposed victims of female bullies were likely to be female and victims of male bullies were male. The researchers found that workplace bullying correlated positively with negative affect and with physical

symptoms, which supported Hypotheses 3a and 3b. Hypothesis 4 was supported by the positive correlation between workplace bullying and employees' intention to leave.

Limitations of the study reported by the researchers were the response rate of the sample, 18 percent, which may not provide adequate representation of the student population. Additionally, since the sample was composed of employed university students, the researchers propose that the students sampled may hold positions in the lower hierarchy levels of the organization. Findings revealed that bullies were of higher rank than their victims which may limit generalizations of the study's results. The strengths of this study were in hypotheses testing of propositions, resulting in a high level of data quality and data analysis. There were also clearly defined procedures. However, the researchers did not define reliability and validity of the scales. Future studies should provide more validity. The researchers proposed that future research should also evaluate links between particular forms of bullying behavior and particular symptoms.³

Pettijohn, Pettijohn, and Taylor (2007) examined the relationships among salespersons' perceptions of business ethics, their employer's ethics, consumer attitudes, job satisfaction, and intention to leave. Retail salespeople were selected for this study since most engage in traditional selling roles and are confronted with many ethical challenges facing all sales professionals on a day-to-day basis. A sampling plan provided 14 retailers of shopping goods (which requires more of a selection process than convenience goods), who employed a total of 156 salespeople. A total of 124 surveys were returned and 119 were usable, for a response rate of 76 percent. The researchers tested 6 hypotheses:

- H1: There will be a significant positive relationship between a salesperson's attitudes as a consumer and his or her ethical perceptions of the employer.

- H2: There will be a significant positive relationship between a salesperson's attitudes toward general business ethics and that person's ethical perceptions of their employer.
- H3: There will be a significant positive relationship between a salesperson's perceptions of general business ethics and that person's level of job satisfaction.
- H4: There will be a significant positive relationship between a salesperson's perceptions of his or her employer's ethics and that person's level of job satisfaction.
- H5: There will be a significant inverse relationship between a salesperson's perceptions of general business ethics and that person's turnover intentions.
- H6: There will be a significant inverse relationship between a salesperson's perceptions of his or her employer's ethics and that person's turnover intentions.

To measure salesperson attitudes towards general business ethics, Singhapakdi, Kraft, Vitell, and Rallapalli's (1995) *Good Ethics Is Good Business* scale was used. The scale had a Cronbach's alpha coefficient of .91 and a mean value of 30.1. The researchers revised the scale from seven questions using a nine-point Likert scale to two questions using a seven-point scale. To analyze the salespersons' perceptions of his or her employer's ethics, a second scale was used which was developed by Singhapakdi et al.'s. (1995) *Corporate Ethical Value* scale. The scale had a Cronbach's alpha coefficient of .79 and a mean value of 26.2. The researchers revised the scale from a nine-point Likert scale to a seven-point scale, but did not report the number of items on the scale. To measure the salesperson's consumer attitudes, the *Alienation: Consumer Alienation from the Marketplace* scale (Allison, 1978) was used. The researchers reduced the original scale from 35 items scored on a seven-point Likert type scale to 15 items. The Cronbach's alpha coefficient for this scale was .85 and the mean reported was 52.6. Job

satisfaction was measured by a modified version of Wood, Chonko, and Hunt's (1986) *Job Satisfaction* scale, which consists of six of the original 14 questions. In this study the scale has an alpha coefficient of .89 and a mean value of 31.4. The researchers did not report whether the responses were on a Likert-type scale. Salesperson's intention to leave was measured using a four-item scale developed by O'Reilly, Chatman, and Caldwell (1991). The researchers did not report whether the responses to questions used a Likert-type scale; however, the scale had an alpha coefficient of .088 and a mean value of 17.9.

The researchers used a Univariate regression statistical analysis to test the hypotheses because it provided the most rigorous test of the results without allowing collinearity of the variables to confound findings (Pettijohn, et al. 2007). The findings supported Hypothesis 1, which revealed that attitudes as a consumer are significantly related to a salesperson's perceptions of his or her employer's ethics. Hypothesis 2 was also supported. The results revealed that a salesperson's general attitude regarding business ethics is significantly related to his or her attitude toward the employer's ethics. The researchers reported results supporting Hypotheses 3 and 4. Hypothesis 3 resulted in a finding that the salesperson's perceptions of general business ethics are significantly related to levels of job satisfaction. Hypothesis 4 was supported by results revealing that the relationship between job satisfaction and the salesperson's perception of his or her employer's ethics is significant. The findings resulted in support of Hypothesis 5. A significant relationship is found between the salesperson's perceptions of general business ethics and his or her turnover intentions. Positive perceptions of business ethics in general will reduce the salesperson's intentions of leaving his or her organization.

Hypothesis 6 was also supported by research resulting in a strong significant relationship between the salesperson's perceptions of the employer's ethics and the salesperson's turnover intentions.

The researchers proposed that good ethics is good business by examining how business ethics affect a salesperson's job satisfaction levels and intention to leave. One way for organizations to reduce turnover and improve job satisfaction is to concentrate on improving salespersons' ethical perceptions of their business. The strengths of this study were in hypotheses testing of propositions, resulting in a high level of data quality, and data analysis. Validity and reliability of the scales was also reported. One of the limitations of the study was the sample of salespeople working in the arena of shopping goods, which may not be generalized to other types of sales positions. The salespeople were also selected by their managers, which may also influence responses of the salespersons. Pettijohn, et al. (2007) suggested future research evaluating additional population samples such as business-to-business sales professionals, or sales people with higher educational levels or income. Additionally, since students were new in the sales arena, their perceptions of ethics of their organization and the effects those observations have on their future behaviors could also be examined.

Synopsis of the Literature

According to Neuman and Baron (1998), "Workplace aggression is a general term encompassing all forms of behavior by which individuals attempt to harm others at work or their organizations, and workplace violence refers only to instances involving direct physical assaults" (p. 393). Matthiesen and Einarsen (2007) found that approximately one in ten individuals were victims of workplace bullying, a term which refers to all

forms of workplace aggression. Understanding the phenomena of human aggression behavior is imperative to effectively address the many challenges organizations face in today's global workplace. In order for organizations to safeguard competitive advantage, maintaining employee well-being, job satisfaction, and retention is of great importance.

Studies have shown that there is a positive relationship between workplace aggression and intention to leave (Djurkovic, McCormack, & Casimir, 2004; Keashly & Neuman, 2005; Tepper, 2000; Tepper et al., 2006; Yeh, 2007). Furthermore, factors surrounding employees' perceptions of organizational justice (procedural, distributive, interpersonal, and informational) in the workplace environment also impact intention to leave (Andersson-Straberg et al., 2007; Loi et al., 2006; Tepper et al., 2006; Yeh, 2007). Vroom's (1964) expectancy theory suggests that employees enter into organizations with expectations and values and if met, then the employees are most likely to remain with their job.

Findings in the literature review illustrate the theories, models, and related propositions that explain why workplace aggression is pervasive in many organizations. Gaps in the literature have revealed that further research must be conducted to explore the effects of workplace aggression behaviors and investigate employees' perceptions of organizational justice and intention to leave. Additionally, the literature is scant on studies explaining the effects of workplace aggression behaviors on organizational justice and intention to leave outside of a university setting, which limits generalizability of findings to a student sample. Furthermore, no studies have been conducted utilizing U.S. telecommunications workers. These limitations will be the focus of this study.

Implications from such research may contribute to enhancing awareness of this phenomenon in the U.S. and also solicit interest in the U.S. legal system to prevent and punish perpetrators and compensate targets of this insidious behavior.

Sources of workplace aggression are very complex. There are many theories that relate to workplace aggression. Beginning with childhood bullying, Olweus (1980) found that children of mothers who condone aggressive behavior, naturally resulted in childhood aggression. Individuals who view themselves as superior beings, such as a workplace bully, may dominate or cause harm to others whom the bully considers to be lesser beings, and may even show aggression without regret in order to defend their position.

Denise Salin (2003) developed a theoretical model that suggests how enabling, motivating, and triggering factors within the organization influence workplace bullying. Enabling factors include a perceived imbalance of power between the bully and victim, while motivating factors within the organization make it sensible for the bully to eliminate rivals who may be in competition for jobs or promotions. Triggering factors that allow bullying behavior to propagate are organizational changes such as restructuring or downsizing (Salin, 2003).

Buss's (1961) human aggression theory was used to explain workplace aggression behaviors in this review. Buss (1961) introduced a framework of human aggression using three typologies: *physical-verbal*, *active-passive*, and *direct-indirect*. Baron and Neuman (1996) expanded on Buss's theory of human aggression and applied the theory to hostile workplace behaviors. According to Neuman and Baron (1998), aggression behaviors originate from the interaction of various "social, situational, and personal

factors” (p. 402). Baron and Neuman (1996; Neuman, 2003) did find that aggression in work environments is more verbal than physical, more passive than active, and more direct than indirect. Neuman and Keashly (2004) developed the Workplace Aggression Research Questionnaire (WAR-Q) which was derived from Buss’s (1961) typology of human aggression theory.

Adam’s (1965) equity theory proposes that workers make every effort to preserve fairness between their job’s inputs and outputs they receive compared to their perceptions of other workers’ inputs and outputs. Equity theory suggests that employees who perceive themselves as either under-compensated or over-compensated will experience distress, and this distress will lead to efforts to bring fairness to the situation (Adams, 1965). Employees who perceive the ratio of their inputs and outcomes as comparable to other employees’ inputs and outcomes will consider that he or she is being treated justly (Adams, 1965). Organizational justice encompasses how employees evaluate whether they have been fairly or unfairly treated in their jobs and how those evaluations affect other work-related functions (Moorman, 1991). When employees feel they are being treated fairly they are considered to be more positive about their employment, their work outcomes, and their superiors (Moorman, 1991). Workers tend to evaluate organizational justice within four classifications of experiences: the outcomes resulting from policies or processes (procedural justice), the outcomes employees receive based on their contribution to the organization (distributive justice), the manner in how courteously and politely managers and coworkers treat the employee (interpersonal justice), and the communications employees receive from authority figures in explaining procedures (informational justice) (Colquitt, 2001).

Vroom's (1964) expectancy theory proposes that employees' behavior is a result of alternative choices made in order to maximize pleasure and minimize pain. The key components of Vroom's (1964) theory are expectancy, instrumentality, and valence.

Expectancy is the "belief concerning the likelihood that a particular act will be followed by a particular outcome" (Vroom, 1964, p. 17). Vroom (1964) defines instrumentality as a probability belief that attaches one outcome such as a high performance level to another outcome such as a reward. Valence refers to the fulfillment level an individual anticipates receiving from an outcome as opposed to the actual satisfaction received after attaining the reward (Vroom, 1964). Vroom's (1964) expectancy theory suggests that employees enter into organizations with expectations and values and if met, then the employees' are most likely to stay. In Vroom's (1964) model, job satisfaction is reflective of the valence or importance to an individual to remain with his job or leave.

Mueller and Price (1990) developed an integrated model of turnover which combines elements of sociology, economics, and psychology. In their model, Vroom's (1964) expectancy theory is the primary foundation. Mueller and Price's (1990) model also identifies employee expectations and values met, as well as interaction with three additional variables such as job satisfaction, organizational commitment and job search behavior.

Further understanding of workplace aggression behaviors is critical in order to reduce employee's perceptions of organizational injustices and turnover intention. To date, no studies have been conducted to analyze the effects of workplace aggression behaviors using Buss's (1961) framework of human aggression (passive-active, verbal-physical, direct-indirect), the four organizational justice dimensions (procedural justice,

distributive justice, interpersonal justice, and informational justice), and intention to leave. The following were the major conclusions of the review of empirical literature:

1. Harvey and Keashly (2004) found that self-esteem, job risk factors, and hours of work were all significantly related to aggression. Hours at work significantly accounted for reported aggression which suggested that increased time at work contributed to higher levels of aggression. Harvey and Keashly (2003) suggested that future research should explore the effects of fatigue and frustration among different occupations, since a requirement that employees work increased hours may trigger aggressive behaviors toward one another. The researchers identified the most important limitation as the fact that the study examined student summer employment, which may not be commensurate with other work experiences. Future studies exploring a larger range of jobs and occupations was recommended.
2. Matthiesen and Einarsen (2007) found that approximately one in ten individuals were found to be victims of workplace bullying, while one in twenty identified themselves as perpetrators of bullying. The limitations to the study identified by the researchers were in the self-report survey method which asked participants to reveal sensitive issues such as either admitting to being a perpetrator, target, or a provocative victim. According to the researchers, perpetrators may not admit to aggressive acts because of social acceptance pressures and may decline to reveal they are workplace bullies. Matthiesen and Einarsen (2007) suggested that since previous research focused on the targeted victim, and very little on the provocative victim,

future research exploring provocative victims is warranted. In addition, future research on perpetrators of workplace bullying, from a different perspective than the target, was also an area for further evaluation.

3. Skogstad, Matthiesen, and Einarsen (2007) investigated direct and indirect relationships between organizational changes and workplace bullying among Norwegian workers. The researchers explored how changes in the work environment such as downsizing, budget cuts, management changes, restructuring, mergers and acquisitions may result in interpersonal conflicts that can escalate to aggression if not resolved. Although the researchers found that different organizational changes were positively correlated with workplace bullying, the relationships between changes and person-related bullying were moderate. The limitations to the study identified by the researchers were in the cross-sectional design of the study, which presented a weak design for making causal inferences. The study was also representative solely of Norwegian workers and not any other population sample from other organizations which may have presented different results. In addition, the participants were asked to respond to organizational changes within the last twelve months, which may have influenced their responses, since they were aware of positive and negative organizational changes.
4. Tepper, Duffy, Henle, and Lambert (2006) conducted a field study among National Guard members and their military supervisors to evaluate antecedents for abusive supervision. The research study explored whether the supervisor's depression mediates the relationship between supervisors'

procedural justice and subordinates' perceptions of their supervisor's abusiveness. Findings reported that supervisors who experienced procedural injustices also suffered from depression, which resulted in abusive behavior towards subordinates who are high in NA (Negative Affect) or those employees who appear to be vulnerable to abuse. A recommendation from the researchers was for organizations that strive to reduce hostile and aggressive behaviors may need to start by treating their supervisors fairly. The researchers identified the most important limitation of this study was that it evaluated subordinates with high NA, which triggers abusive behavior from supervisors because the subordinates may be unpleasant and not easy to work with. In contrast, employees with high NA versus employees with lower NA may be more willing to recollect objectionable supervisory behavior because of their anxious persona. Tepper et al. (2006) suggested that future research should explore the offender's character traits such as stress and anger, along with victims' traits such as being submissive or provocative.

5. Loi, Hang-yue, and Foley (2006) examined the relationships among law firm attorneys' organizational justice perceptions, perceived organizational support (POS), organizational commitment, and intention to leave. A limitation to the study was that turnover intention was investigated but not actual turnover of employees. Future research to conduct a longitudinal study was recommended. Additionally, researchers focused on distributive and procedural justice and did not evaluate the effects of interpersonal and informational justice, which leaves opportunity for future study. Furthermore,

since the respondents were limited to attorneys in Hong Kong, generalizability of the findings may not be applicable to other occupations and cultures. Future studies testing the researcher's model with different professions and cultures was recommended.

6. Andersson-Straberg, Sverke, and Hellegren (2007) examined employees' perceptions of justice relating to pay setting among Swedish nurses. The researchers evaluated how elements in the workplace environment and factors relating to the pay-setting process influence employees' perceptions of pay justice and whether pay justice mediated the effects on work attitudes and behaviors. In addition, the researchers recommended that future studies be conducted with other occupational groups and cultural settings to evaluate employees' perceptions of justice regarding pay. Because of its reliability, it was also recommended that Colquitt's (2001) scale be used to evaluate different kinds of stressors that may affect employee perceptions of organizational justice in other workplace environments.
7. Yeh (2007) examined turnover intention among accounting professionals in Florida. The researcher observed that this study was limited to data from a specialized service industry and that results may not apply to non-service type professions. Additionally, Yeh (2007) suggested that studies examining various types of workers from different industry sectors are necessary to evaluate organizational commitment for future turnover research. Furthermore, future studies should provide more validity.
8. Djurkovic, McCormack, and Casimir (2004) examined the physical and

psychological effects of workplace bullying and their relationship to intention to leave among 150 undergraduate business and economic students. Limitations of the study reported by the researchers were the response rate of the sample, 18 percent, which may not provide adequate representation of the student population. Additionally, since the sample was composed of employed university students, the researchers suggested that the students sampled may hold positions in the lower hierarchy levels of the organization. The researchers proposed that future research also evaluate links between particular forms of bullying behavior and particular symptoms.

9. Pettijohn, Pettijohn, and Taylor (2007) examined the relationships among salespersons' perceptions of business ethics, their employer's ethics, consumer attitudes, job satisfaction, and intention to leave. The researchers proposed that good ethics is good business by examining how business ethics affect a salespersons' job satisfaction levels and intention to leave. One way for organizations to reduce turnover and improve job satisfaction is to concentrate on improving salespersons' ethical perceptions of their business. One of the limitations of the study was the sample of salespeople working in the arena of shopping goods, which may not be generalized to other types of sales positions. The researchers (2007) recommended that future research evaluate additional population samples such as business-to-business sales professionals, or sales people with higher educational levels or income.

To address these gaps in the literature, a non-experimental, quantitative, exploratory (comparative), and explanatory (correlational) online survey research design

was used in this study to examine the relationships among workplace aggression behaviors, employee demographics and work profiles, organizational justice, and intention to leave was recommended. The perceptions of management and non-management telecom employees in the United States were examined and accessed through an online survey for this study. Finally, a methodological study of the reliability and validity of the scales used as a self-report instrument was necessary. The following section provides the theoretical framework to guide this study, which leads to the research questions and hypotheses.

Theoretical Framework

Guiding this research study are theories about human aggression (Buss, 1961), equity theory (Adams, 1965), and Vroom's (1964) expectancy theory. Buss (1961) further proposed how human aggression theory could be analyzed using three elements: physical-verbal, active-passive, and direct-indirect. According to Buss (1961), this framework was useful in identifying potential aggressors in the workplace. Adams' (1965) equity theory proposed that employees who perceived the ratio of their inputs and outcomes as comparable to other employees' inputs and outcomes would consider that he or she is treated justly. Organizational justice encompasses how employees evaluate if they have been fairly or unfairly treated in their workplace environment and how those evaluations affect other work-related functions (Moorman, 1991). Mueller and Price's (1990) integrated model of turnover, which combined elements of sociology, economics, psychology, and incorporates Vroom's (1964) expectancy theory as the primary foundation. Vroom's (1964) expectancy theory suggested that employees enter into

organizations with expectations and values and if met, then the employees were most likely to stay or leave.

To date, no studies have been conducted to analyze the effects of workplace aggression behaviors using Buss's (1961) framework of human aggression (passive-active, verbal-physical, direct-indirect), the four organizational justice dimensions (procedural justice, distributive justice, interpersonal justice, and informational justice), and intention to leave. Furthermore, no studies have been performed to examine workplace aggression behaviors among U.S. telecom employees, organizational justice, and intention to leave. The research questions and hypotheses that follow are formulated in this study to explain these relationships.

Based on the review of the literature, conclusions, recommendations for future study, and the theoretical framework that was guiding this study, the following research questions and hypotheses were generated for this study about the relationships among workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), employee demographics and work profiles, organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), and intention to leave.

Research Questions

1. What are employee demographic characteristics, work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), frequency of aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave?
2. Are there differences in work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), workplace aggression behaviors (passive-active,

verbal-physical, direct-indirect), and intention to leave according to employee demographic characteristics?

3. Are there differences in demographic characteristics, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice and informational justice), workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave according to employee work profiles?

Hypotheses

- H1: Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of workplace aggression (passive-active, verbal-physical, direct-indirect behaviors).
- H_{1a} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of *passive* workplace aggression behaviors.
- H_{1b} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of *active* workplace aggression behaviors.
- H_{1c} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of *verbal* workplace aggression behaviors.
- H_{1d} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of *physical* workplace aggression behaviors.
- H_{1e} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of *direct* workplace aggression behaviors.
- H_{1f} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of *indirect* workplace aggression behaviors.

- H_{1g} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of *workplace aggression behaviors*. (Total score).
- H2: Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant negative explanatory variables of intention to leave.
- H3: Workplace aggression behaviors (passive-active, verbal-physical, direct-indirect) are significant positive explanatory variables of intention to leave.
- H4: Employee demographic characteristics, work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), and workplace aggression behaviors (passive, active, verbal, physical, direct, indirect), are significant explanatory variables of intention to leave.

A hypothesized model (see Figure 2-1) illustrates the relationships among major theories and hypotheses tested in this study. Figure 2-1 presents a hypothesized model which combines the theoretical framework and hypotheses tested in this study using Buss's (1961) human aggression model, Adam's (1965) equity theory, and Vroom's (1964) expectancy theory. The hypothesized model identifies the explanatory relationship between employee demographics and work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), workplace aggression behavior (passive-active, verbal-physical, and direct-indirect), and intention to leave. The dependent variable changes in each explanatory hypothesis to workplace aggression behaviors (passive-active, verbal-physical, and direct-indirect) (Hypothesis 1, and related sub-hypotheses H_{1a}, H_{1b}, H_{1c}, H_{1d}, H_{1e}, H_{1f}, and H_{1g}), and intention to leave (Hypotheses 2, 3, and 4).

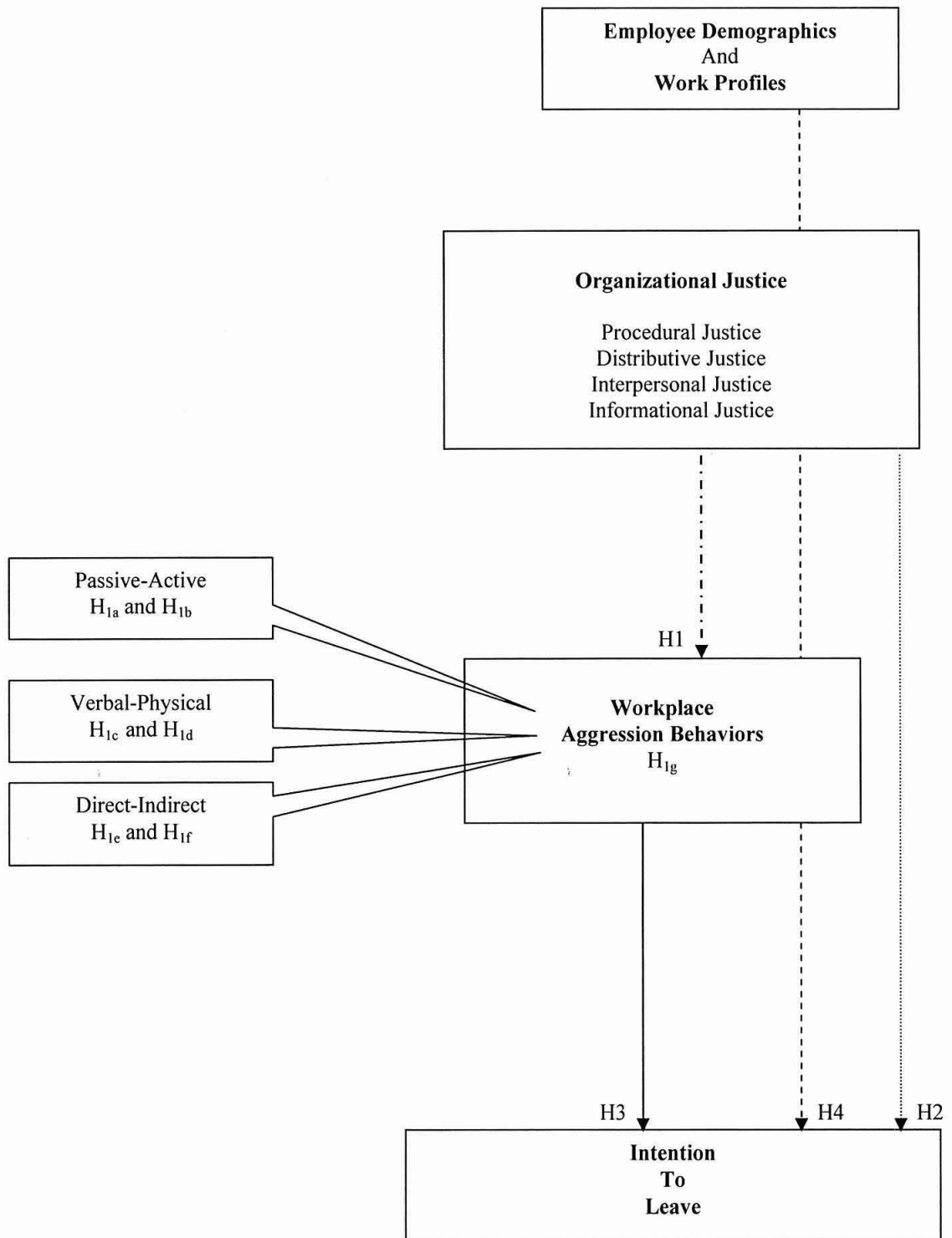


Figure 2-1. Hypothesized model of relationships among employee demographics and work profiles, organizational justice, workplace aggression behavior, and intention to leave.

Chapter II provided a critical analysis of the literature and related theoretical framework leading to the propositions being tested via hypotheses and research questions to be answered in this study. A hypothesized model and research hypotheses were also presented in this chapter. The major gaps in the literature were that there were no empirical studies that examined the relationships among workplace aggression, employee demographics, work profiles, organizational justice, and intention to leave among telecom employees in the U.S. The theoretical framework in this chapter emphasized Buss's (1961) human aggression model, Adam's (1965) equity theory, and Vroom's (1964) expectancy theory. To guide this study, Chapter III presents the research methods utilized in answering the research questions and testing the hypotheses about the relationships among workplace aggression behavior, employee demographics and work profiles, organizational justice, and intention to leave. Included in Chapter III is a description of the research design, the sampling plan, instrumentation, ethical considerations, and data collection processes along with methods of data analysis and evaluation of research methods.

CHAPTER III

RESEARCH METHODS

Chapter III presents the research methods to be utilized in answering the research questions and testing the hypotheses for this study among workplace aggression behaviors, employee demographics and work profiles, organizational justice, and intention to leave. The research questions and hypotheses which appeared at the end of Chapter II were developed from gaps in the literature and the need to examine the effects of workplace aggression in a field environment. This chapter begins with a description of the research design and continues with the study's population and sampling plan, instrumentation procedures, ethical considerations, methods of data analysis, and evaluation of research methods.

Research Design

A non-experimental, quantitative, exploratory (comparative), and explanatory (correlational) online survey research design was proposed for this study to examine the relationships among workplace aggression behaviors, employee demographics and work profiles, organizational justice, and intention to leave for management and non-management telecommunications employees in the U.S. The sample was accessed through Zoomerang Market Tools using a simple random sampling method.

The survey instrument for this study contained five parts, including filter questions (See Appendix A). *Part I: Demographic Characteristics*, developed by the researcher, contained five items which measured demographic variables of age, gender, race, ethnicity, and education (RQ1, RQ3, and H4). *Part II: Work Profile*, developed by the researcher, included six items which measured variables of seniority, job category,

how many people supervised, supervisory responsibility, number of employees at work location, and telecommunications sector (RQ1, RQ2, and H4). *Part III: Organizational Justice*, developed by Colquitt (2001) contained 20 items which measured variables of procedural justice, distributive justice, interpersonal justice, and informational justice (RQ1, RQ2, RQ3, and H1, H_{1a}, H_{1b}, H_{1c}, H_{1d}, H_{1e}, H_{1f}, H_{1g}, H2, and H4). *Part IV: Workplace Aggression Behaviors*, developed by Neuman and Keashly (2004), called the *Workplace Aggression Research Questionnaire (WAR-Q)*, included 60 items which measured frequency of workplace aggression behaviors. Six subscales of aggression (passive, active, verbal, physical, direct, and indirect behaviors) were analyzed in RQ1, RQ2, RQ3, and explanatory variables of H1, H_{1a}, H_{1b}, H_{1c}, H_{1d}, H_{1e}, H_{1f}, H_{1g}, and positive explanatory variables of H3. The WAR-Q measured the explanatory independent variables of H4. *Part V: Turnover Intention*, developed by Kim, Price, Mueller, and Watson (1996), and adapted for this study, included five items which measured employees' plans to leave the organization (descriptive variable in RQ1, and dependent variable in RQ2, RQ3, explanatory variables in H2, H3, and H4).

To answer *Research Question 1*, about employee demographic characteristics, work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave, measures of central tendency, frequency distributions, and variability were used.

To answer *Research Question 2*, about the differences in work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), workplace aggression behaviors (passive-active,

verbal-physical, direct-indirect), and intention to leave (dependent variables), according to employee demographic characteristics (attribute variable), independent *t*-tests for two group comparisons using multiple ANOVA tests followed by post hoc comparisons where there were significant differences among variables, and Chi-Square for comparisons between groups with nominal data such as gender and job category were used.

To answer *Research Question 3*, about the differences in demographic characteristics, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave (dependent variables), according to employee work profiles (attribute variable), independent *t*-tests for two group comparisons, multiple ANOVA tests followed by post hoc comparisons where there were significant differences among variables, and Chi-Square for comparisons between groups with nominal data were used.

To test *Hypothesis 1*, H_{1a} , H_{1b} , H_{1c} , H_{1d} , H_{1e} , H_{1f} , and H_{1g} , multiple regression analyses using the hierarchical (forward) method were used to examine if organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) were significant explanatory variables of employee perceptions of workplace aggression behaviors (passive-active, verbal-physical, direct-indirect) (dependent variables).

To test *Hypothesis 2*, multiple regression analyses using the hierarchical (forward) method were used to examine if organizational justice (procedural justice,

distributive justice, interpersonal justice, and informational justice), were significant negative explanatory variables of intention to leave.

To test *Hypothesis 3*, multiple regression analysis using the hierarchical (forward) method was used to examine if workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), were significant positive explanatory variables of intention to leave.

To test *Hypothesis 4*, multiple regression analysis using the hierarchical (forward) method was used to examine if employee demographic characteristics, work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), and workplace aggression behaviors (passive-active, verbal-physical, direct-indirect) were significant explanatory variables of intention to leave.

Population, Sample, and Setting

Target Population

One of the first steps in the process of collecting quantitative data is to identify the participants in the study, the procedure for selecting these individuals, and determining the number of participants needed for data analysis (Creswell, 2005). The target population is the group the researcher would like to sample in order to develop generalizations. In this study, the target population included both management (salaried) and non-management (hourly) telecommunications employees located throughout the U.S. The telecommunications sector includes voice, data, graphics, video, and Internet communications transported through wireless and wireline technologies. As of August, 2008, the U.S. telecommunications industry employed 1,016,300 workers, 184,100

management and 832,200 non-management employees (U.S. Department of Labor, Bureau of Labor Statistics, 2008a). Seventy percent of employees work in locations with 50 or more workers (U.S. Department of Labor, Bureau of Labor Statistics, 2008b). Although the telecommunications industry employs workers in a variety of occupations, 49% of all workers were employed with wired telecommunications carriers, 21% of jobs were with wireless telecommunications carriers, 15% with cable and other program distributors, and the remaining 15% were with satellite telecommunications and telecommunications resellers (U.S. Department of Labor, Bureau of Labor Statistics, 2008b).

Accessible population. Because it was not feasible to evaluate the large target population of telecommunications employees, this study was limited to a more reasonable sampling frame within an accessible population. The accessible population consisted of a group of individuals within the target population who were accessible to the researcher (Trochim, 2006). These included approximately 275 telecommunications employees who could be reached through Zoomerang Market Tools, an online survey marketing company hired by the researcher (See Appendix C for Zoomerang Market Tools contract). The sample was composed of 275 management and non-management telecom employees located throughout the United States. In this study, the accessible population was limited to management and non-management telecommunications employees who could be contacted by Zoomerang Market Tools through e-mail.

Simple random sampling plan. A simple random sampling plan was used for this study. Zoomerang Market Tools distributed an e-mail from its panel distribution list for U.S. telecommunications employees, which included the researcher's invitation to

participate in the online survey and a link to the survey. Zoomerang Market Tools randomly selected the workers from a variety of management and non-management positions which included wireline, wireless, cable or other program distributors, and satellite and telecommunications resellers. The telecommunications employees were randomly selected from a panel of approximately 10,000+ participants who met the industry profile. Zoomerang Market tools secured this industry sample by way of a *viral* marketing plan. With a *viral* marketing plan, respondents who may have participated in other Zoomerang surveys were contacted online and asked if they would like to join *Zoom Panel* to participate in various online studies based on the individual's demographic and industry sector characteristics.

Respondents are offered incentives to participate in these studies through Zoomerang's *ZoomPoint* program. Points are accrued based on the average time a survey takes to complete. For example, a 10 minute survey would reward a participant 50 points; a 20 minute survey would reward 75 to 100 points. *ZoomPoints* can then be redeemed for popular movies, music, and gift cards from popular retailers.

In order to receive a 20 to 30% *quick through* or response rate of 275 respondents to satisfy the researcher's sample requirement, Zoomerang Market tools sent a total of 1,654 e-mail invitations. Included in the invitation sent by Zoomerang Market Tools, was a link to the consent form for eligible telecom employees that were interested in participating in the survey (See Appendix C). The final data-producing sample was analyzed according to the distribution of target population characteristics based on those who agreed to participate in the study.

Sample size. According to Babbie (2004), “The larger the sample selected, the more accurate it is as an estimation of the population from which it was drawn” (p. 193). In order to answer the three research questions, test the five hypotheses, and seven sub-hypotheses, the researcher must evaluate the sample size required for statistical analysis to ensure strengthened internal validity of the study. Additionally, the sample size required based on the target population is identified in order to ensure external validity of the study.

Two major data analyses, multiple regression and exploratory factor analysis, were used to answer the three research questions, test the five hypotheses, and seven sub-hypotheses in this study. The sample size needed for multiple regression analysis was estimated using Green’s (1991) formula of: $N > 50 + 8(m)$, where m represented the number of explanatory variables. There were a total of 21 observed variables for this research study: five demographic characteristics, six work profile characteristics, four variables for organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), and six variables for workplace aggression behaviors (passive, active, verbal, physical, direct, and indirect). Intention to leave was not included since it was a dependent variable. Based on Green’s (1991) formula, the minimum sample size needed for multiple regression analysis was $N > 50 + 8(21) = 218$.

For conducting an exploratory factor analysis, the minimum sample size should be 3 to 20 times the number of items in the longest scale, with an absolute range from 100 to 1,000 (Mundfrom, Shaw, & Ke, 2005). Exploratory factor analysis was performed for all scales used in this study. The scale with the highest number of items was the *Workplace Aggression Research Questionnaire (WAR-Q)*, developed by Neuman and

Keashly (2004), with 60 items. This would require a sample size of 3(60) to 20(60), or 180 to 1,200 with a minimum of 100. Furthermore, a sample size of less than 100 may result in a threat to internal validity, and 1,200 would strengthen the internal validity of the study.

To estimate the sample size needed for population validity, based on a population size of 1,016,300 telecom employees, according to Gay and Airasran (2000), beyond a population of 100,000, an adequate sample size was 400, “but would be even more confident with a sample of 500” (p. 135). For internal validity purposes an adequate sample size would be 218 and the optimal sample size would be 1,200 (exploratory factor analysis). For external validity purposes, a minimum sample size of 400 would be necessary to minimize threats to external validity and an optimal sample size of 500 would be a strength to the external validity of this study. Thus, a sample size of 500 to 1,200 is optimal. Because of the researcher’s inability to access a larger sample size, Zoomerang’s Market Tool’s projection proposed that there would be 275 respondents completing the online survey (data-producing sample). According to Gay and Airasian (2000), this number was below the requirement of the minimum sample size of 500, which may have posed a threat for external validity of the study.

Inclusion and Exclusion Criteria

Although this study required collecting responses from a sample of management and non-management telecommunications employees, some criteria were utilized to enhance external validity. The eligibility requirements of the sample were:

Inclusion Criteria

1. Telecommunications employees who were 18 years or older.

2. Telecommunications employees who were presently employed full time.
3. Telecommunications employees who were either management, or non-management.
4. Telecommunications employees who had at least one e-mail address.
5. Telecommunications employees who were located in the United States.

Exclusion Criteria

1. Telecommunications employees who were not 18 years or older.
2. Telecommunications employees who were not employed full time.
3. Telecommunications employees who were neither management nor non-management (temporary or subcontracted employees).
4. Telecommunications employees who did not have at least one e-mail address.
5. Telecommunications employees who were not located in the United States.

Setting

The survey was distributed online using Zoomerang Market Tools. Therefore the research setting for data collection was in the office or home of participants, a natural setting.

Instrumentation

In this study, a self-report survey (See Appendix A) was composed of five parts: Part 1: *Demographic Characteristics*, Part 2: *Work Profiles*, Part 3: *Organizational Justice*, Part 4: *Workplace Aggression Behaviors*, and Part 5: *Turnover Intention*. Four filter questions: *Are you a full time employee in telecommunications?* *Are you 18 or over?* *Are you located inside of the United States?* and *Are you a full-time telecommunications management or non-management worker? (not a sub-contractor,*

temporary, or seasonal employee), were asked at the beginning of the survey. The purpose of the filter questions was to ensure that the respondents fit four basic restrictions: being employed full time in the telecommunications sector (Wireline, wireless, cable or other program distributors, or satellite and telecom resellers), being 18 years of age or more, located inside of the United States, and if the respondent was not a sub-contractor, temporary, or seasonal employee. Altogether, the survey instrument consisted of a total of 96 questions. After trial testing the survey among 13 colleagues, the researcher established that the survey would take respondents approximately 15 minutes to complete. The entire survey was conducted electronically. The constructs measured, authors of measures, types of scales measured, number of items, and scoring range are illustrated in Table 3-1.

Table 3-1

Constructs Measured, Authors of Measures, Types of Scales Measured, and Number of Items and Scoring Range in the Survey Instrument

Part	Construct	Instrument Name and Developers	Scale Type	Item Number and Score Range Where Applicable
1	Employee Demographics	Researcher	Dichotomous Fill in the Blank Multiple Choice	5 items measure employee demographics: Gender, Ethnicity, Age, Education, and Race.
2	Work Profiles	Researcher	Multiple Choice Fill in the Blank Dichotomous	6 items measure employee work profiles: Seniority, Job category, Level of supervisory responsibility, Number of employees supervised, Number of employees at work location, and Type of telecom sector.
3	Organizational Justice	<i>Justice Measure Items</i> Developed by Colquitt (2001). Organizational Justice Scale	5-Point Frequency Rating Scale	20 items Measure Justice 20-100 score range
	Procedural Justice			7 items, 7-35 score range
	Distributive Justice			4 items, 4-20 score range
	Interpersonal Justice			4 items, 4-20 score range
	Informational Justice			5 items, 5-25 score range
4	Workplace Aggression Behaviors	<i>WAR-Q (Workplace Aggression Research Questionnaire).</i> Neuman and Keashly (2004).	7-Point Frequency Rating Scale	60 items Measure Aggression Behaviors
	Verbal Aggression			40 items, 40-280 score range
	Physical Aggression			20 items, 20-140 score range
	Active Aggression			43 items, 43-301 score range
	Passive Aggression			17 items, 17-119 score range
	Direct Aggression			45 items, 45-315 score range
	Indirect Aggression			15 items, 15-105 score range
	Total Score			60 items, 60-420 score range
5	Turnover Intention	Kim, Price, Mueller & Watson (1996).	5-Point Likert	5 items, 5-25 score range
	Total			96

Part I: Demographic Characteristics

Part I, *Demographic Characteristics*, was designed by the researcher and contained five fill-in-the-blank, dichotomous, and multiple-choice items. Employee demographics included questions about age in years, gender, race, ethnicity, and education. Race and ethnicity were based on the U.S. Census Bureau (2008) categorization. (See Appendix A, Part I).

Part II: Work Profiles

Part II, *Work Profiles* of the survey was designed by the researcher and contained four fill-in-the-blank, dichotomous, and multiple-choice items. Six questions consisting of seniority (years of employment specified in years), job category (management or non-management), level of supervisory responsibility (Executive, Manager, First Line, Team Leader, and Other), supervisory responsibility (number of employees supervised), number of employees at work location (*1 to 4, 5 to 49, 50 to 249 and 250 or more*), and telecommunications sector (wireline, wireless, cable and other program distributors, and satellite and telecom resellers) were included. (See Appendix A, Part II).

Part III: Organizational Justice

Part III, *Organizational Justice*, was a 20-item questionnaire introduced by Colquitt (2001) to measure perceptions of organizational justice: procedural justice, distributive justice, interpersonal justice, and informational justice. Colquitt's (2001) instrument was designed to investigate the theoretical dimensions of organizational justice and also to test the construct validity of a new justice measure. The 20-item survey was taken from the theoretical origins grounded in seminal works of organizational justice literature, procedural justice, distributive justice, interpersonal

justice, and informational justice (Colquitt, 2001). All 20 items were rated on a 5-point frequency rating of 1) *to a very small extent*, 2) *to a small extent*, 3) *neutral*, 4) *to a large extent*, and 5) *to a very large extent* (Colquitt, 2001). Higher scores indicated increased perceptions of justice and equitable treatment, lower scores represented unjust and unfair treatment. The score range for the total scale was 20-100. There were four sub-scales: *procedural justice*, *distributive justice*, *interpersonal justice*, and *informational justice*.

Colquitt (2001) indicated seven items that measured *procedural justice*, extracted from the works of Thibaut and Walker (1975) and Leventhal (1980). The procedural justice subscale measured employee voice, influence over outcomes of procedures, consistency, freedom from bias, accuracy, appeal, and ethics and moral standards (Colquitt, 2001). The score range for this subscale was 7 to 35.

Colquitt (2001) indicated four items that measured *distributive justice*, based on the works of Leventhal (1976), which evaluated employee outcomes in relationship to employee inputs. The score range for this subscale was 4 to 20.

Colquitt (2001) indicated four items that measured *interpersonal justice*, based on the work of Bies and Moag (1986) which defined the treatment employees receive when new procedures are implemented. The score range for this subscale was 4 to 20.

Colquitt (2001) indicated five items that measured *informational justice*, based on the works of Bies and Moag (1986) and Shapiro et al. (1994), which identified how well an authority figure communicates and explains procedures. The score range for this subscale was 5 to 25. (See Appendix A, Part III).

Reliability. Two independent studies were conducted to test the psychometric characteristics of this justice measure. Study 1 examined justice in a university classroom setting. Study 2 examined justice in an automotive parts manufacturing company (Colquitt, 2001). Reliability for procedural justice was .93, interpersonal justice .92, informational justice .90, and distributive justice .93 (Colquitt, 2001). In this study, internal consistency reliability using coefficient alpha was estimated for the total organizational justice scale and four subscales.

Validity. The evidence for construct validity of the organizational justice scale was provided by confirmatory factor analysis. The good fit of the four-factor structure (procedural justice, distributive justice, interpersonal justice, and informational justice), suggests adequate discriminant validity. Colquitt (2001) found that the four-factor model provided a good fit to the data, resulting in IFI = .91, CFI = .91 and RMSEA = .067. According to Colquitt (2001), the good fit of the structural model along with the statistical significance of its paths suggested adequate predictive validity. Exploratory factor analysis was conducted on the organizational justice scale to establish construct validity and further determine the multidimensionality of the scale.

Part IV: Workplace Aggression Behaviors

Part IV, *Workplace Aggression Behaviors*, was measured by 60 items of the *Workplace Aggression Research Questionnaire (WAR-Q)* developed by Neuman and Keashly (2004). The WAR-Q had six subscales that measured types of aggression based on Buss's (1961) typology of aggression: physical-verbal, active-passive, and direct-indirect (Neuman & Keashly, 2004). The WAR-Q was used to measure the frequency and source of each aggressive behavior. For the purpose of this study, the researcher

measured only the frequency of the aggressive behaviors. The WAR-Q also requested respondents to indicate the main actor who was the perpetrator for each aggression; however, this information was not used in this study. Furthermore, sample item number 1, "Subjected to bad jokes" was excluded from the survey instrument (Neuman & Keashly, 2004). (See Appendix A, Part IV).

All items of the WAR-Q were rated on a 7-point frequency rating scale of 1) *never*, 2) *once*, 3) *a few times*, 4) *several times*, 5) *monthly*, 6) *weekly*, and 7) *daily* (Neuman & Keashly, 2004). The score range for the total scale was 60-420. Higher scores indicated greater frequency of exposure to aggression behaviors. All 60-items within the WAR-Q examined more than one subscale. For example, item WARQ14 *Been subjected to obscene or hostile gestures* measured *active*, *physical*, and *direct* aggression behaviors. The type of aggression behavior for the subscale, number of items of each subscale and the items forming the subscale are as follows:

Verbal Aggression (40 items, with a score range 40-280): 6, 7, 8, 9, 10, 13, 15, 16, 17, 19, 20, 21, 22, 25, 26, 27, 28, 31, 32, 33, 34, 35, 38, 40, 41, 42, 43, 44, 45, 46, 48, 49, 50, 51, 53, 54, 55, 56, 57, 58.

Physical Aggression (20 items, with a score range of 20-140): 2, 3, 4, 5, 11, 12, 14, 18, 23, 24, 29, 30, 36, 37, 39, 47, 52, 59, 60, 61.

Active Aggression (43 items, with a score range of 43-301): 2, 6, 7, 10, 11, 13, 14, 19, 20, 23, 24, 25, 27, 30, 31, 32, 33, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61.

Passive Aggression (17 items, with a score range of 17-119): 3, 4, 5, 8, 9, 12, 15, 16, 17, 18, 21, 22, 26, 28, 29, 34, 35.

Direct Aggression (45 items, with a score range of 45-315): 2, 3, 4, 6, 7, 8, 9, 10, 13, 14, 15, 19, 20, 21, 22, 23, 24, 25, 27, 30, 31, 34, 36, 38, 39, 40, 41, 42, 44, 45, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61.

Indirect Aggression (15 items, with a score range of 15-105): 5, 11, 12, 16, 17, 18, 26, 28, 29, 32, 33, 35, 37, 43, 46. (See Appendix A, Part IV).

Reliability. To evaluate reliability, a sample of 8,596 U.S. Department of Veterans Affairs employees was selected over a three-year time frame, from November, 2000 to November, 2002 (Neuman & Keashly, 2004). Coefficient alpha as an estimate of internal consistency reliability for the total 60 item WAR-Q was .95. For the aggression behavior subscales, reliabilities were as follows: verbal aggression (40 items), coefficient alpha of .95; physical aggression (20 items), coefficient alpha of .82; active aggression (43 items), coefficient alpha of .94; passive aggression (17 items), coefficient alpha of .89; direct aggression (45 items), coefficient alpha of .94; and, indirect aggression (15 items), coefficient alpha of .87 (Neuman & Keashly, 2004). In this study, internal consistency reliability using coefficient alpha was estimated for the total WAR-Q and its six subscales.

Validity. Harvey and Keashly (2003) found in a study of 115 undergraduate Business Administration students that the internal consistency of the measure was good with Cronbach's alpha of .89. According to Dr. Neuman, "the instrument was derived from a good deal of prior research in organizational settings and consultation with recognized scholars in the area. From this perspective, we believe it has substantial content and face validity" (J. Neuman, personal communication, October 4, 2007). Exploratory factor analysis was conducted on the WAR-Q to establish construct validity and to further determine the multidimensionality of the scale.

Part V: Turnover Intention

Part V, *Turnover Intention* was a five-item, 5-point Likert scale, which was designed by Kim, Price, Mueller, and Watson (1996) and adapted for this study to measure employee turnover intention. Mueller and Price (1990) developed an integrated

model of turnover which combined elements of sociology, economics, and psychology. In their model, Vroom's (1964) expectancy theory was the primary foundation.

Vroom's (1964) expectancy theory proposed that employees enter into organizations with expectations and values and if met, then the employees are most likely to stay. Mueller and Price's (1990) model also identified employee expectations and values met, as well as interaction with three additional variables such as job satisfaction, organizational commitment, and job search behavior.

Kim, Price, Mueller, and Watson's (1996) Turnover Intention scale was used to examine career goals among physicians at Wilford Hall Medical Center, a U.S. Air Force hospital in Lackland Air Force Base, Texas. Intention to leave was measured by the following four items: "I plan to leave the Air Force as soon as possible," "Under no circumstances will I voluntarily leave the Air Force," "I would be reluctant to leave the Air Force," and "I plan to stay in the Air Force as long as possible" (Kim et al., 1996, p. 959). Respondents were requested to select a response from a five-point Likert scale: 1) *strongly agree*, 2) *agree*, 3) *neither agree nor disagree*, 4) *disagree*, and 5) *strongly disagree* (Kim et al., 1996). Reverse scoring was used for the negative item. With permission from one of the authors, the researcher adapted the scale to add an additional item: *If perpetrator left, I would stay with the organization*. The total score range was 5-25. Higher scores indicated increased propensity of quitting the job. (See Appendix A, Part V).

Reliability. In their 1996 study, Kim et al. examined reliability. The coefficient alpha was .85. In this study, internal consistency reliability using coefficient alpha was estimated for the total turnover intention scale.

Validity. Discriminant and convergent validities of the measures were assessed by exploratory factor analysis (Kim et al., 1996). Although the researchers did not present results of factor analysis, “the vast majority of the measures showed discriminant and convergent validity” (Kim, et al., 1996, p. 959). Exploratory factor analysis was conducted on the Turnover Intention scale to further establish construct validity and determine the unidimensionality of the scale.

Procedures: Data Collection Methods and Ethical Considerations

The following section describes the ethical considerations regarding the use of computer and Internet-based research that was taken into account for the protection of all participants. Additionally, each step in data collection, informed consents, protection of anonymity, and data storage/disposal processes of this study will be discussed in sequence below.

1. Permissions were obtained from the copyright holders of the instruments used in this study as the first required action before obtaining IRB (Institutional Review Board) approval and collecting any data. The researcher received permissions from the following authors: 1) Neuman and Keashly for the use of the *Workplace Aggression Research Questionnaire (WAR-Q)*; 2) *Turnover Intention*, developed by Kim, Price, Mueller, and Watson (1996); and 3) *Organizational Justice Measures*, developed by Colquitt (2001). (See Appendix B).
2. Policies and procedures for Zoomerang Market Tools. (See Appendix G).
 - a. A one-time fee of \$2,995.00 was paid to Zoomerang Market Tools to host the survey, and deploy via e-mail to the telecom sample.

(See Appendix F).

- b. Zoomerang did not track or record respondents e-mail or IP addresses or other personal identification (See Appendix G – all contractual and privacy information with Zoomerang).
- c. Zoomerang saved collected data on a secure server stored behind the latest in firewall and intrusion prevention technology.
- d. Zoomerang Market Tools created a one-time e-mail invitation and sent it to telecom sample with a desired response up to N = 275.

(See Appendix C).

3. Following a successful proposal defense and before IRB application, an online survey was created and posted on Zoomerang.

(See Appendix A).

A):⁴ The online survey site included information concerning voluntary consent, including purpose of the research, instructions for completing the survey, and any possible risks and benefits to the participants, anonymity of respondents to the researcher, privacy, and a link to the filter questions preceding the survey. After answering yes to all four filter questions, respondents were directed to the survey. Zoomerang was not accessible until the research proposal is approved by the Lynn University Institutional Review Board (IRB). (See Appendix E for authorization of informed consent and Appendix A, Part 1 for filter questions).

4. Following a successful proposal defense, the next required step was to obtain approval for the study from the Institutional Review Board at Lynn

University. Data collection began only after approval was received from Lynn's Institutional Review Board. The following required forms and the research protocol were submitted to the Lynn University Institutional Review Board for the Protection of Human Subjects for its review and approval:

- a. IRB Form 1, Application and Research Protocol for Review of Research Involving Human Subjects in a New Project IRB.
(IRB Form 1 included a request for waiver of documentation of signed consent.)
 - b. IRB Form 3, Request for Expedited Review.
 - c. The online authorization for informed consent (Appendix E).
5. After IRB approval was obtained from Lynn University, data collection commenced. (See Appendix D for IRB approval letter and Appendix E for web version of the approved authorization for voluntary consent.)
6. The following process was followed to send an e-mail to the initial sample.
- a. Zoomerang deployed survey within 24-hours (excluding Saturday, Sunday, and U.S. Holidays) upon receipt of signed proposal agreement and final verification that the survey was complete and ready to deploy.
 - b. Zoomerang Market Tools created the e-mail invitation using the standard Zoomerang Sample e-mail invitation.
 - c. Zoomerang sent a single mailing of the e-mail invitation.
 - d. The link took the participants to the "Informed Consent" (See Appendix E). Following authorization of their consent, the

participants clicked the “agree” button and were then directed to a secure web page. If the “disagree” button was selected, the participant was then taken back to the Zoomerang home page.

- e. The estimated time for the completion of the survey was 15 minutes.
 - f. Participation in the survey was voluntary and all responses were reported as a group response. The researcher had no knowledge of who completed the survey and all participants were anonymous to the researcher.
 - g. The respondents had to click a “submit” button once the survey was completed.
 - h. Zoomerang reported real-time reporting and data export via the researcher’s Zoomerang account.
7. After participants clicked the link in the e-mail invitation, they were directed to the authorization of voluntary consent (See Appendix E). If the participants agreed to participate in the online survey, they were directed to click the *agree* button. If the participants selected the *disagree* button, they were automatically exited from the survey.
8. Participants who clicked the *agree* button were directed to the four filter questions. If participants answered *yes* to all questions, they were directed to the online survey. (See Appendix A). If participants answered *no* to any of the filter questions, they were automatically exited from the survey.
9. The online survey was estimated for respondents to complete within approximately 15 minutes.

10. The data collection process was conducted for one month and no longer than one year after IRB approval. The start date followed the date this study was approved by the IRB.
11. No later than one month following the completion of the data collection, the researcher submitted a Report of Termination of the Project to the Lynn University IRB (Form 8, See Appendix G).
12. Data analysis was performed as described in the data analysis section using SPSS 15.0 version or later. Data was stored electronically in a personal computer with security (requiring a password and identification).
13. The online survey data will be destroyed after five years.

Methods of Data Analysis

Data collected from returned online surveys was analyzed with Statistical Package for Social Sciences (SPSS), Version 15.0, to answer research questions, test hypotheses, and provide psychometric assessments of the reliability and validity of scales. Exploratory data analysis, exploratory factor analysis, internal consistency reliability, descriptive statistics, independent *t*-tests, and one-way ANOVA coefficient alphas as estimates of stepwise hierarchical multiple regression analysis and multiple mediated regression were used to analyze data. The following steps were utilized prior to analyzing the data:

1. Data Coding – Collected data had predetermined coding assigned to each variable in this study.
2. Exploratory Data Analysis – Descriptive statistics were examined to verify the parameters used in this study. Variables that did not meet statistical

assumptions were identified. Tables were used to display the data for better understanding and to determine what kind of results might be expected. When one or more assumptions were broken, transforming variables were considered.

3. Exploratory Factor Analysis was used to identify the underlying factors of each scale.
4. Internal Consistency Reliability was estimated using Cronbach's coefficient alpha. Coefficient alphas of .70 and greater identified satisfactory reliability.
5. Independent *t*-tests were used to compare the differences of means in two groups.
6. ANOVAs with post hoc comparisons analysis were used to compare the differences of means in three or more groups.
7. Chi-Square tests for comparisons between groups with nominal data such as gender and job category were used.
8. Hierarchical Multiple Regression Analysis was used to explain a set of independent and attribute variables and the dependent variables.

Research Questions

Research question 1 was analyzed by descriptive statistics such as measures of frequency distributions, measures of central tendency, and variability to report the employee demographic characteristics, work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), frequency of aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave.

Research question 2 was an exploratory (comparative) research designed to identify differences in work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave according to employee demographic characteristics. Independent *t*-tests for two group comparisons and multiple ANOVA tests followed by post hoc comparisons where there were significant differences among three or more group comparisons were used to determine if there were differences according to employee demographic characteristics.

Research question 3 was an exploratory (comparative) research question designed to identify differences in demographic characteristics, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice and informational justice), workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave according to employee work profiles. Independent *t*-tests for two group comparisons and multiple ANOVA tests followed by post hoc comparisons where there are significant differences among variables were used.

Hypotheses Testing

The notation that was used to represent the variables tested in the hypotheses in this study follows below:

b_0 = constant

b = unstandardized coefficient

ε_1 = error

Dependent Variables

Y_1 = passive aggression

Y_2 = active aggression

Y_3 = verbal aggression

Y_4 = physical aggression

Y_5 = direct aggression

Y₆ = indirect aggression
Y₇ = Total score workplace aggression behaviors
Y₈ = Intention to leave

Employee demographic characteristics

X₁ = age
X₂ = gender
X₃ = race
X₄ = ethnicity
X₅ = education

Work Profile Characteristics

X₆ = seniority
X₇ = job category (management or non-management)
X₈ = number of employees supervised
X₉ = supervisory responsibility (level)
X₁₀ = number of employees at work location
X₁₁ = telecommunications sector

Organizational Justice

X₁₂ = procedural justice
X₁₃ = distributive justice
X₁₄ = interpersonal justice
X₁₅ = informational justice

Workplace aggression behaviors

X₁₆ = passive aggression
X₁₇ = active aggression
X₁₈ = verbal aggression
X₁₉ = physical aggression
X₂₀ = direct aggression
X₂₁ = indirect aggression

Research Hypothesis Testing

Multiple regression analysis using hierarchical (forward) method was used to test Hypothesis 1 to determine whether there was a significant explanatory (correlational) relationship between organizational justice (procedural justice, distributive justice, interpersonal justice and informational justice) and the dependent variable, workplace aggression behaviors (passive-active, verbal-physical, direct-indirect).

Notation to test regression models of this hypothesis was:

Where Y = workplace aggression behaviors (dependent variables)

Y_1 = passive aggression

Y_2 = active aggression

Y_3 = verbal aggression

Y_4 = physical aggression

Y_5 = direct aggression

Y_6 = indirect aggression

Y_7 = total score workplace aggression behaviors

Hypothesis 1a: $Y_1 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$

Hypothesis 1b: $Y_2 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$

Hypothesis 1c: $Y_3 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$

Hypothesis 1d: $Y_4 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$

Hypothesis 1e: $Y_5 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$

Hypothesis 1f: $Y_6 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$

Hypothesis 1g: $Y_7 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$

Where Y_1 = *passive* workplace aggression behaviors (dependent variable).

$$Y_1 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$$

Where Y_2 = *active* workplace aggression behaviors (dependent variable).

$$Y_2 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$$

Where Y_3 = *verbal* workplace aggression behaviors (dependent variable).

$$Y_3 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$$

Where Y_4 = *physical* workplace aggression behaviors (dependent variable).

$$Y_4 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$$

Where $Y_5 = \text{direct}$ workplace aggression behaviors (dependent variable).

$$Y_5 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$$

Where $Y_6 = \text{indirect}$ workplace aggression behaviors (dependent variable).

$$Y_6 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$$

Where $Y_7 = \text{total score}$ workplace aggression behaviors (dependent variable).

$$Y_7 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$$

Multiple regression analysis using the hierarchical (forward) method was used to test Hypothesis 2 to determine whether there was a significant negative explanatory (correlational) relationship between organizational justice (procedural justice, distributive justice, interpersonal justice and informational justice) and intention to leave (dependent variable).

Notation to test regression models of this hypothesis was:

Where $Y_8 = \text{Intention to leave}$ (dependent variable)

$$Y_8 = b_0 + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + \varepsilon_1$$

Multiple regression analysis using the hierarchical (forward) method was used to test Hypothesis 3 to determine whether there was a significant positive explanatory (correlational) relationship among workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave (dependent variable).

Notation to test regression models of this hypothesis was:

Where $Y_8 = \text{Intention to leave}$ (dependent variable).

$$Y_8 = b_0 + b_{16}X_{16} + b_{17}X_{17} + b_{18}X_{18} + b_{19}X_{19} + b_{20}X_{20} + b_{21}X_{21} + \varepsilon_1$$

Multiple regression analysis using hierarchical (forward) method was used to test Hypothesis 4 to determine whether there was a significant explanatory (correlational)

relationship among employee demographic characteristics, work profiles, organizational justice (procedural justice, distributive justice, interpersonal justice and informational justice), workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), and the dependent variable, intention to leave.

Notation to test regression models of this hypothesis was:

Where Y_8 = intention to leave

$$Y_8 = b_0 + b_1X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + b_7 X_7 + b_8 X_8 + b_9 X_9 + b_{10}X_{10} + b_{11}X_{11} + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15} X_{15} + b_{16} X_{16} + b_{17} X_{17} + b_{18} X_{18} + b_{19} X_{19} + b_{20} X_{20} + b_{21} X_{21} + \varepsilon_1$$

Evaluation of Research Methods

The research methods used in this study were evaluated for the strengths and weaknesses in internal validity and external validity of the study. Internal validity relates to inferences that can be drawn about causal relationships between attribute or independent variables and dependent variables (Trochim, 2006). External validity of a research study refers to the ability to generalize results or conclusions of the research to settings or populations (Trochim, 2006). Strengths and weaknesses that may affect internal and external validity are as follows:

Internal Validity

Internal Validity Strengths

1. The survey included a non-experimental, quantitative, exploratory (comparative), and an explanatory (correlational) research design using multiple regression in the analysis (explanatory).

2. The quantitative research design had higher internal validity than a qualitative research design.
3. The study utilized valid and reliable research instruments to measure the variables for workplace aggression behaviors, organizational justice, intention to leave, employee demographics, and work profiles.
4. A sufficient sample size existed to conduct the data analysis.
5. Use of rigorous data analysis contributed to the internal validity of the study.
6. Statistical procedures were appropriate to answer research questions.

Internal Validity Weaknesses

1. An internal validity weakness of the study was the sample size.
2. The use of an online survey instrument may have produced a lower response rate than other methods.
3. The non-experimental design was considered weak because it did not have randomization, controls, or manipulation of the independent variables. Experimental designs have a higher internal validity than non-experimental designs.

External Validity

External Validity Strengths

1. Data collection in a natural setting strengthens external validity (ecological validity).
2. Although the initial sample size was low, by incorporating Zoomerang Market Tools, the respondents were drawn from an existing telecom employee panel,

thereby strengthening external validity of the study in order to generalize findings to the accessible population.

External Validity Weaknesses

1. The study was limited to the United States.
2. Telecommunications employees who were surveyed were only those that had access to the Internet.
3. Respondents were offered incentives to participate in the survey by Zoomerang Market Tools, which may have posed a threat to external validity.

Chapter III described the research methods that were used to answer research questions and test hypotheses regarding the relationship among workplace aggression behaviors, employee demographics and work profiles, organizational justice, and intention to leave for management and non-management telecommunications employees in the U.S. The chapter also described the research design, population and sampling, instrumentation, data collections procedures that also included ethical considerations, and methods of data analysis to answer research questions and test hypothesis. Lastly, the chapter evaluated the research methods in this study. Chapter IV will present the study's results.

CHAPTER IV

RESULTS

Chapter IV presents the findings of the study about the relationship among employee demographics and work profiles, organizational justice, workplace aggression behaviors, and intention to leave for management and non-management telecommunications employees in the United States. The data collected from the returned surveys were analyzed using the Statistical Program for the Social Sciences (SPSS) version 15.0. A description of the final data producing sample, response rates, psychometric evaluation of the subscales and total scales of the measures used in this study, answers to the research questions, testing of the hypotheses, and other findings are included in Chapter IV.

Final Data Producing Sample

The target population for the study includes both management (salaried) and non-management (hourly) telecommunications employees located throughout the United States. The telecommunications sector includes voice, data, graphics, video, and Internet communications transported through wireless and wireline technologies. As of August, 2008, the U.S. telecommunications industry employed 1,016,300 workers, consisting of 184,100 management and 832,200 non-management employees (U.S. Department of Labor, Bureau of Labor Statistics, 2008a). Seventy percent of employees work in locations with 50 or more workers (U.S. Department of Labor, Bureau of Labor Statistics, 2008b). Although the telecommunications industry employs workers in a variety of occupations, 49% of all workers are employed with wired telecommunications carriers, 21% of jobs were with wireless telecommunications carriers, 15% with cable

and other program distributors, and the remaining 15% were with satellite telecommunications and telecommunications resellers (U.S. Department of Labor, Bureau of Labor Statistics, 2008b).

In order to satisfy the sample requirements for this study, the researcher contracted with Zoomerang Market Tools to provide a response rate of 275 completed e-mail surveys. Zoomerang Market Tools randomly sent a total of 1,654 surveys to an accessible population of management and non-management telecom employees located throughout the United States. The total number of employees starting the survey was 321. The total number of employees completing the survey was 242. Of the 242 completed surveys, 241 were usable. The response rate was 14.6%. Management employees represented 32.8%, while non-management employees represented 67.2% of the 241 employees responding to the survey. Participants who worked in locations of 50 or more employees represented 33.2% of the total respondents. Wireline, wireless, and cable telecommunications employees closely matched the target population with the sample responses resulting in 49.4% wireline, 25.3% wireless, and 17.4% cable. Satellite and telecommunications resellers represented 7.9% of the sample. According to Gay and Airasran (2000), beyond a population of 100,000, an adequate sample size is 400, "but would be even more confident with a sample of 500" (p. 135). A comparative analysis of the sample with the target population is presented in Table 4-1.

Table 4-1

Comparative Analysis of the Sample with the Target Population

Telecommunications Employee Characteristics	Target Telecom Population	Sample Telecom Population	Percentage Differences (+, -)
Job Category	N = 1,016,300	N = 241	
Non-Management	81.9%	67.2%	+14.7%
Management	18.1%	32.8%	-14.7%
Employees at Work Location	N = 1,016,300	N = 241	
1 to 4		8.3%	
5 to 49		17.8%	
50 to 249	70%	33.2%	+36.8%
250 or More		40.7%	
Telecommunications Sector	N = 1,016,300	N = 241	
Wireline Telecommunications	49%	49.4%	-.4%
Wireless Telecommunications	21%	25.3%	-4.3%
Cable and Other Program Distributors	15%	17.4%	-2.4%
Satellite and Telecom Resellers	15%	7.9%	+7.1%

+ Sample is over represented. – Sample is under represented.

Reliability and Validity of the Measurement Scales

The survey was composed of five parts which included three scales that were used in this study. Part I, *Employee Demographics* was designed by the researcher and contained five fill-in-the-blank, dichotomous, and multiple-choice items. Employee demographics included questions about age in years, gender, race, ethnicity, and education. Race and ethnicity were based on the U.S. Census Bureau (2008) categorization. Part II, *Work Profiles* of the survey was also designed by the researcher and contained four fill-in-the-blank, dichotomous, and multiple-choice items. Six questions consisting of seniority (years of employment), job category (management or non-management), level of supervisory responsibility (Executive, Manager, First Line, Team Leader, and Other), supervisory responsibility (number of employees supervised), number of employees at work location (*1 to 4*, *5 to 49*, *50 to 249*, and *250 or more*), and

telecommunications sector (wireline, wireless, cable and other program distributors, and satellite and telecom resellers) were included. Part III was the *Organizational Justice* scale, which measured variables of procedural justice, distributive justice, interpersonal justice, and informational justice (Colquitt, 2001). Part IV was the *Workplace Aggression Research Questionnaire (WAR-Q)*, developed by Neuman and Keashly (2004), and measured the frequency of workplace aggression behaviors. Six subscales of aggression (passive, active, verbal, physical, direct, and indirect behaviors) were analyzed. Lastly, Part V of the survey was the *Turnover Intention* scale, developed by Kim, Price, Mueller, and Watson (1996), and adapted for this study, measured employees' intention to leave the organization.

Prior to answering research questions and testing hypotheses, reliability and validity analyses were conducted on each of the three scales to ensure the adequacy of their psychometric qualities. Exploratory factor analysis and internal consistency reliability analysis using Cronbach's alpha for each of the three scales is presented.

Exploratory Factor Analysis and Internal Consistency Reliability Analysis of Part III: Organizational Justice

Part III: Organizational Justice scale, developed by Colquitt (2001) contains 20 items which measure variables of procedural justice, distributive justice, interpersonal justice, and informational justice. All 20 items are rated on a 5-point frequency rating of 1) *to a very small extent*, 2) *to a small extent*, 3) *neutral*, 4) *to a large extent*, and 5) *to a very large extent* (Colquitt, 2001). Higher scores indicated increased perceptions of justice and equitable treatment, lower scores represented unjust and unfair treatment. The score range for the total scale is 20-100. There are four subscales: *procedural justice* (7

items, with a score range of 7-35), *distributive justice* (4 items, with a score range of 4-20), *interpersonal justice* (4 items, with a score range of 4-20), and *informational justice* (5 items, with a score range of 5-25).

According to Colquitt (2001), reliability of the justice scale has good internal consistency with a Cronbach's alpha coefficient reported of .93 for procedural justice, .92 for interpersonal justice, .90 for informational justice, and .93 for distributive justice. In this study, internal consistency reliability using coefficient alpha was estimated for the total organizational justice scale and four subscales.

Before factor analysis was conducted on the *Organizational Justice* scale, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was performed resulting in an outcome of .918. Outcomes above 0.9 are considered "superb" and indicate that factor analysis was appropriate (Field, 2005, p. 650). Bartlett's Test of Sphericity was also completed resulting in a significance value of .000, which is highly significant, indicating once more, that factor analysis on the scale is appropriate (Field, 2005).

To further establish construct validity of the *Organizational Justice* scale, principal components analysis with varimax rotation was conducted. Exploratory factor analysis was conducted on the 20-item *Organizational Justice* scale. Four factors, procedural justice (PJ), distributive justice (DJ), interpersonal justice (IP), and informational justice (IJ) were expected to emerge from the analysis. Items with eigenvalues greater than 1.0 were used to extract factors. Exploratory factor analysis (EFA) resulted in four factors being extracted. The eigenvalues totals for Factor 1 through Factor 4 range from 1.028 to 9.909 and the total variance explained was 73.345%. The factor values were as follows: Factor 1 consisted of 20 items with factor loadings

ranging from .586 to .835, factor 2 consisted of seven items with factor loadings ranging from .309 to .410, factor 3 consisted of four items with factors loadings ranging from .427 to .502, and factor 4 consisted of three items with factor loadings ranging from .304 to .365.

To reduce the number of factors in the analysis and to evaluate the factor loadings in terms of theory and comprehensibility, principal components analysis using varimax rotation was performed (Garson, 2008). Four factors were extracted for the factor analysis which accounted for 73.345% of the total variance explained. Eigenvalues ranged from 3.303 to 4.303. Generally, a loading of 0.4 is considered satisfactory in research for exploratory purposes, therefore the researcher established a cutoff of 0.4 (Garson, 2008). The factor loadings and names of the factors are: factor 1 (procedural justice) consisted of seven items ranging from .553 to .788, factor 2 (distributive justice) consisted of five items ranging from .639 to .848, factor 3 (interpersonal justice) consisted of four items ranging from .766 to .852, and factor 4 (informational justice) consisted of four items ranging from .685 to .810. All 20-items of the *Organizational Justice* scale fit the theoretical construct of the factor loadings. This resulted in a 20-item scale comprised of seven procedural justice items, five informational justice items, four distributive justice items, and four interpersonal justice items. The factor item loadings for *Part III: 20-Item Organizational Justice* scale after a four factor extraction is presented in Table 4-2.

Table 4-2

Initial Factor Item Loadings for Part III: 20-Item Organizational Justice Scale After Extraction

Item # and Part 3: Organizational Justice Scale ^a	Loadings for Factor 1 Procedural Justice	Loadings for Factor 2 Distributive Justice	Loadings for Factor 3 Interpersonal Justice	Loadings for Factor 4 Informational Justice
PJ3	.768			
PJ2	.778			
PJ1	.776			
PJ4	.744			.329
PJ5	.738			
PJ7	.582			.380
PJ6	.553		.319	
IF4		.848		
IF2		.829		
IF3		.758		.407
IF5		.741		
IF1		.639		
DJ2			.852	
DJ4	.306		.816	
DJ1	.310		.787	
DJ3	.309		.766	
IP1		.340		.810
IP2		.389		.796
IP3		.390		.789
IP4				.685

^aNote. PJ=Procedural Justice, DJ=Distributive Justice, IP=Interpersonal Justice and IF=Informational Justice

For the 20-item, *Part III: Organizational Justice* scale, the internal consistency reliability Cronbach's alpha was .945. Based on exploratory factor analysis there were four subscales of the *Organizational Justice* scale: a 7-item *procedural justice* subscale ($\alpha = .903$), a 4-item *distributive justice* subscale ($\alpha = .916$), a 4-item *interpersonal justice* subscale ($\alpha = .930$), and a 5-item *informational justice* subscale ($\alpha = .898$), resulting in a 20-item scale. The scale had an internal consistency above the recommended cutoff of 0.7, which indicates that all items could be retained for the subscales (Garson, 2008). The corrected item total correlations and the alpha if items deleted for the 20-item *Organizational Justice* scale is presented in Table 4-3.

Table 4-3

Coefficient Alphas and Corrected Item-total Correlations for Part III: 20-Item Organizational Justice Scale (Total Scale Coefficient Alpha = .945)

Item	Corrected Item Total Correlation	Cronbach's Alpha if Item Deleted
Procedural Justice		
7 Items (score range 7-35)		
Coefficient $\alpha = .903$		
PJ1	.753	.885
PJ2	.666	.894
PJ3	.768	.883
PJ4	.772	.883
PJ5	.793	.880
PJ6	.587	.902
PJ7	.661	.895
Distributive Justice		
4 Items (score range 4-20)		
Coefficient $\alpha = .916$		
DJ1	.792	.896
DJ2	.850	.878
DJ3	.777	.903
DJ4	.819	.887
Interpersonal Justice		
4 Items (score range 4-20)		
Coefficient $\alpha = .930$		
IP1	.883	.894
IP2	.919	.881
IP3	.906	.884
IP4	.653	.968
Informational Justice		
5 Items (score range 5-25)		
Coefficient $\alpha = .898$		
IF1	.631	.901
IF2	.776	.870
IF3	.807	.865
IF4	.800	.865
IF5	.740	.879
Total Scale 20 Items		
(score range 20-100)		
Coefficient $\alpha = .945$		

Exploratory Factor Analysis and Internal Consistency Reliability Analysis of

Part IV: Workplace Aggression Behaviors

Part IV: Workplace Aggression Behaviors, developed by Neuman and Keashly (2004), called the *Workplace Aggression Research Questionnaire (WAR-Q)*, includes 60 items which measure frequency of workplace aggression behaviors. Six subscales of

aggression, *passive*, *active*, *verbal*, *physical*, *direct*, and *indirect* behaviors are analyzed. All items of the WAR-Q are rated on a 7-point frequency rating scale of 1) *never*, 2) *once*, 3) *a few times*, 4) *several times*, 5) *monthly*, 6) *weekly*, and 7) *daily* (Neuman & Keashly, 2004). Higher scores indicated greater frequency of exposure to aggression behaviors. The score range for the total scale is 60-420. Each of the 60 items in the WAR-Q analyzes more than one subscale. For example, item WARQ14 *Been subjected to obscene or hostile gestures* measures *active*, *physical*, and *direct* aggression behaviors.

According to Neuman and Keashly (2004), coefficient alpha as an estimate of internal consistency reliability for the total 60 item *WAR-Q* was .95. For the aggression behavior subscales, reliabilities were as follows: *verbal aggression* (40 items), coefficient alpha of .95; *physical aggression* (20 items), coefficient alpha of .82; *active aggression* (43 items), coefficient alpha of .94; *passive aggression* (17 items), coefficient alpha of .89; *direct aggression* (45 items), coefficient alpha of .94; and, *indirect aggression* (15 items), coefficient alpha of .87 (Neuman & Keashly, 2004).

Before factor analysis was conducted on the *WAR-Q*, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was conducted resulting in an outcome of .922. Values above .9 are considered “superb” (Field, 2005, p. 650). Bartlett’s Test of Sphericity was also conducted resulting in a significance value of .000, which is highly significant, indicating again that factor analysis on the scale is appropriate (Field, 2005).

To further establish construct validity of the *WAR-Q*, principal components analysis with varimax rotation was conducted. Exploratory factor analysis was conducted on the 60-item *WAR-Q*. Six factors, *passive*, *active*, *verbal*, *physical*, *direct*, and *indirect aggression behaviors* were expected to emerge from the analysis. Items with

eigenvalues greater than 1.0 were used to extract factors. Exploratory factor analysis (EFA) resulted in nine factors being extracted. The eigenvalues totals for Factor 1 through Factor 9 range from 1.006 to 26.245 and the total variance explained was 70.952%. The factor values were as follows: Factor 1 consisted of 60 items with factor loadings ranging from .432 to .788, factor 2 consisted of 12 items with factor loadings ranging from .352 to .655, factor 3 consisted of 3 items with factor loadings of .303 to .398, factor 4 consisted of 3 items with a factor loading of .325 to .432, factor 5 consisted of 1 item with a factor loading of .454, factor 6 consisted of 2 items with factor loadings of .438 to .495, factor 7 consisted of 2 items with a factor loading of .371 to .473, factor 8 consisted of 1 item with a factor loading of .557, and factor 9 consisted of two items with factor loadings of .309 to .314.

To reduce the number of factors in the analysis and to evaluate the factor loadings in terms of theory and comprehensibility, principal components analysis using varimax rotation was conducted (Garson, 2008). Two factors were extracted for the factor analysis which accounted for 54.363% of the total variance explained. Eigenvalues ranged from 14.948 to 17.669. Generally, a loading of 0.4 is considered satisfactory in research for exploratory purposes (Garson, 2008). The factor loadings and names of the factors are: factor 1 which includes *passive*, *verbal*, and *indirect aggression*, consisting of 38 items ranging from .417 to .823. Factor 2 which include *active*, *physical*, and *direct aggression* consisting of 32 items ranging from .426 to .909. The factor loadings according to the six subscales are as follows: *passive* consisting of 16 items with a factor loading of .462 to .823, *verbal* consisting of 29 items with a factor loading of .428 to .823, *indirect* consisting of 13 items with a factor loading of .462 to .786, *active*

consisting of 29 items with a factor loading of .426 to .909, *physical* consisting of 13 items with a factor loading of .476 to .909, and *direct* consisting of 27 items with a factor loading of .440 to .909.

Although item #5, *Had others consistently arrive late for meetings that you called*, did not fit the theoretical construct of the factor loadings after varimax rotation, it was not excluded from further analysis. The 60-item scale was comprised of six aggression items: *passive* (16 items), *verbal* (29 items), *indirect* (13 items), *active* (29 items), *physical* (13 items), and *direct* (27 items). The type of aggression behavior for the subscale, number of items of each subscale and the items forming the subscale are as follows:

Passive Aggression (16 items, with a score range of 16-112): 3, 4, 5, 8, 9, 15, 16, 17, 18, 21, 22, 26, 28, 29, 34, 35.
(1 item was omitted): 12.

Verbal Aggression (29 items, with a score range 29-203): 6, 8, 9, 10, 15, 16, 17, 19, 20, 21, 22, 25, 26, 28, 31, 32, 33, 34, 35, 38, 41, 42, 43, 44, 45, 46, 48, 51, 56.
(11 items were omitted): 7, 13, 27, 40, 49, 50, 53, 54, 55, 57, 58.

Indirect Aggression (13 items, with a score range of 13-91): 5, 16, 17, 18, 26, 28, 29, 32, 33, 35, 37, 43, 46.
(2 items were omitted): 11, 12.

Active Aggression (29 items, with a score range of 29-203): 7, 11, 13, 14, 19, 24, 27, 30, 31, 33, 38, 39, 40, 41, 43, 47, 48, 49, 50, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61.
(14 items were omitted): 2, 6, 10, 20, 23, 25, 32, 36, 37, 42, 44, 45, 46, 51.

Physical Aggression (13 items, with a score range of 13-91): 4, 5, 11, 12, 14, 24, 30, 39, 47, 52, 59, 60, 61.
(7 items were omitted): 2, 3, 18, 23, 29, 36, 37.

Direct Aggression (27 items, with a score range of 27-189): 4, 7, 13, 14, 19, 24, 27, 30, 31, 38, 39, 40, 41, 47, 48, 49, 50, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61.
(18 items were omitted): 2, 3, 6, 8, 9, 10, 15, 20, 21, 22, 23, 25, 34, 36, 42, 44, 45, 51.

The factor item loadings for *Part IV: 60-Item Workplace Aggression Research*

Questionnaire (WAR-Q) after a two factor extraction is presented in Table 4-4.

Table 4-4

Initial Factor Item Loadings for Part IV: 60-Item Workplace Aggression Research Questionnaire After Extraction

Item # and Part IV: Workplace Aggression Research Questionnaire ^a	Loadings for Factor 1	Loadings for Factor 2
	Passive (P) Verbal (V) Indirect (I) Aggression	Active (A) Physical (PH) Direct (D) Aggression
WARQ22 (P, V)	.823	
WARQ10 (V)	.795	
WARQ32 (V, I)	.786	
WARQ42 (V)	.785	
WARQ26 (P, V, I)	.785	
WARQ25 (V)	.775	
WARQ23	.768	
WARQ18 (P, I)	.764	
WARQ45 (V)	.759	
WARQ44 (V)	.743	
WARQ15 (P, V)	.737	
WARQ2	.734	
WARQ20 (V)	.727	
WARQ34 (P, V)	.724	
WARQ9 (P, V)	.685	
WARQ35 (P, V, I)	.674	
WARQ51 (V)	.666	
WARQ17 (P, V, I)	.663	
WARQ41 (V)	.653	.426
WARQ19 (V)	.646	.428
WARQ21 (P, V)	.640	
WARQ46 (V, I)	.635	
WARQ36	.624	
WARQ8 (P, V)	.607	
WARQ6 (V)	.602	
WARQ28 (P, V, I)	.598	
WARQ37 (I)	.592	
WARQ43 (A, V, I)	.554	.479
WARQ3 (P)	.549	
WARQ38 (A, V, D)	.545	.491

Table 4-4 Continued

Item # and Part IV: Workplace Aggression Research Questionnaire ^a	Loadings for Factor 1	Loadings for Factor 2
	Passive Verbal Indirect Aggression	Active Physical Direct Aggression
WARQ31 (A, V, D)	.538	.452
WARQ33 (V, I)	.537	.431
WARQ29 (P, I)	.506	
WARQ4 (P, PH, D)	.462	.440
WARQ47 (A, PH, D)		.909
WARQ59 (A, PH, D)		.873
WARQ61 (A, PH, D)		.858
WARQ52 (A, PH, D)		.842
WARQ60 (A, PH, D)		.827
WARQ49 (A, D)		.824
WARQ58 (A, D)		.803
WARQ40 (A, D)		.794
WARQ39 (A, PH, D)		.755
WARQ53 (A, D)		.734
WARQ30 (A, PH, D)		.732
WARQ50 (A, D)		.674
WARQ13 (A, PH, D)		.626
WARQ55 (A, D)		.612
WARQ12 (PH)		.605
WARQ14 (A, PH, D)	.417	.598
WARQ7 (A, D)		.565
WARQ24 (A, PH, D)		.554
WARQ48 (V, A, D)	.435	.549
WARQ27 (A, D)		.539
WARQ57 (A, D)		.526
WARQ16 (P, V, I)	.494	.503
WARQ11 (A, PH)		.492
WARQ56 (V, A, D)	.428	.482
WARQ54 (A, D)		.476
WARQ5 (P, I, PH)		

^aNote. P = Passive, V = Verbal, I = Indirect, A = Active, PH = Physical, and D = Direct Aggression

For the 60-item, *Part IV: Workplace Aggression Research Questionnaire*, the internal consistency reliability was calculated using Cronbach's alpha. For the total scale, the overall Cronbach's Alpha reported was .976. The scale had an internal consistency above the recommended cutoff point of 0.7 (Field, 2005). The Cronbach's alpha if item deleted for the total scale is reported in Table 4-5.

Table 4-5

Corrected Item-total Correlations and Cronbach's Alpha if Item Deleted for Part IV: 60-Item Workplace Aggression Research Questionnaire (Total Scale Coefficient Alpha= .976)

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
WARQ2	.747	.975
WARQ3	.538	.976
WARQ4	.604	.976
WARQ6	.676	.976
WARQ7	.500	.976
WARQ8	.668	.976
WARQ9	.585	.976
WARQ10	.762	.975
WARQ11	.563	.976
WARQ12	.601	.976
WARQ13	.590	.976
WARQ14	.675	.976
WARQ15	.714	.975
WARQ16	.683	.976
WARQ17	.519	.976
WARQ18	.665	.976
WARQ19	.767	.975
WARQ20	.745	.975
WARQ21	.578	.976
WARQ22	.750	.975
WARQ23	.698	.976
WARQ24	.616	.976
WARQ25	.726	.975
WARQ26	.646	.976
WARQ27	.581	.976
WARQ28	.674	.976
WARQ29	.629	.976
WARQ30	.636	.976
WARQ31	.710	.976
WARQ32	.753	.975
WARQ33	.655	.976
WARQ34	.683	.976
WARQ35	.719	.975
WARQ36	.593	.976
WARQ37	.684	.976
WARQ38	.731	.975
WARQ39	.509	.976
WARQ40	.591	.976
WARQ41	.761	.975
WARQ42	.724	.975
WARQ43	.713	.975
WARQ44	.791	.975
WARQ45	.809	.975
WARQ46	.687	.976
WARQ47	.549	.976
WARQ48	.661	.976
WARQ49	.548	.976

Table 4-5 Continued

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
WARQ50	.582	.976
WARQ51	.799	.975
WARQ52	.539	.976
WARQ53	.631	.976
WARQ54	.579	.976
WARQ55	.552	.976
WARQ56	.654	.976
WARQ57	.584	.976
WARQ58	.611	.976
WARQ59	.642	.976
WARQ60	.505	.976
WARQ61	.527	.976
WARQ5	.396	.976

Based on EFA there were six subscales of the *Workplace Aggression Research Questionnaire* scale: a 29-item *verbal aggression* subscale ($\alpha = .967$), a 13-item *physical aggression* subscale ($\alpha = .910$), a 29-item *active aggression* subscale ($\alpha = .960$), a 16-item *passive aggression* subscale ($\alpha = .925$), a 27-item *direct aggression* subscale ($\alpha = .958$), and a 13-item *indirect aggression* subscale ($\alpha = .910$), resulting in a 60-item scale. The coefficient alpha for the total score of the 60-item scale is ($\alpha = .976$). The coefficient alphas and the corrected item total correlations for the revised 60-item *Workplace Aggression Research Questionnaire* subscales is presented in Table 4-6.

Table 4-6

Coefficient Alphas and Corrected Item-total Correlations for Part IV: 60-Item Workplace Aggression Research Questionnaire (Total Scale Coefficient Alpha = .976)

Item	Corrected Item Total Correlation	Cronbach's Alpha if Item Deleted
Passive Aggression		
16 Items		
(score range 16-112)		
Coefficient $\alpha = .925$		
WARQ3	.554	.923
WARQ4	.540	.924
WARQ5	.399	.927

Table 4-6 Continued

Item	Corrected Item Total Correlation	Cronbach's Alpha if Item Deleted
WARQ8	.627	.921
WARQ9	.607	.922
WARQ15	.750	.917
WARQ16	.567	.923
WARQ17	.620	.922
WARQ18	.766	.917
WARQ21	.673	.920
WARQ22	.810	.915
WARQ26	.740	.916
WARQ28	.652	.921
WARQ29	.611	.922
WARQ34	.667	.920
WARQ35	.686	.920
Verbal Aggression		
29 Items		
(score range 29-203)		
Coefficient $\alpha = .967$		
WARQ6	.653	.966
WARQ8	.655	.966
WARQ9	.600	.967
WARQ10	.785	.965
WARQ15	.747	.965
WARQ16	.644	.966
WARQ17	.574	.967
WARQ19	.747	.966
WARQ20	.775	.965
WARQ21	.596	.967
WARQ22	.808	.965
WARQ25	.767	.965
WARQ26	.716	.966
WARQ28	.654	.966
WARQ31	.659	.966
WARQ32	.778	.965
WARQ33	.632	.966
WARQ34	.709	.966
WARQ35	.702	.966
WARQ38	.662	.966
WARQ41	.763	.965
WARQ42	.765	.965
WARQ43	.681	.966
WARQ44	.813	.965
WARQ45	.826	.965
WARQ46	.674	.966
WARQ48	.628	.966
WARQ51	.779	.965
WARQ56	.584	.967
Indirect Aggression		
13 Items		
(score range 13-91)		
Coefficient $\alpha = .910$		

Table 4-6 Continued

Item	Corrected Item Total Correlation	Cronbach's Alpha if Item Deleted
WARQ16	.639	.904
WARQ17	.517	.911
WARQ18	.693	.901
WARQ26	.691	.901
WARQ28	.657	.903
WARQ29	.647	.904
WARQ32	.745	.898
WARQ35	.756	.899
WARQ37	.648	.903
WARQ43	.655	.903
WARQ46	.706	.900
WARQ33	.608	.905
WARQ5	.391	.913
Active Aggression		
29 Items		
(score range 29-203)		
Coefficient $\alpha = .960$		
WARQ7	.551	.959
WARQ11	.564	.959
WARQ13	.644	.959
WARQ14	.683	.958
WARQ19	.691	.959
WARQ24	.617	.959
WARQ27	.615	.959
WARQ30	.772	.958
WARQ31	.660	.959
WARQ33	.656	.959
WARQ38	.662	.959
WARQ39	.668	.959
WARQ40	.737	.958
WARQ41	.687	.959
WARQ43	.692	.958
WARQ47	.779	.958
WARQ48	.675	.958
WARQ49	.753	.958
WARQ50	.689	.958
WARQ52	.735	.958
WARQ53	.770	.958
WARQ54	.586	.959
WARQ55	.618	.959
WARQ56	.692	.958
WARQ57	.666	.959
WARQ58	.762	.958
WARQ59	.835	.958
WARQ60	.700	.959
WARQ61	.732	.959

Physical Aggression
13 Items (score range 13-91)
Coefficient $\alpha = .910$

Table 4-6 Continued

Item	Corrected Item Total Correlation	Cronbach's Alpha if Item Deleted
WARQ4	.580	.906
WARQ5	.375	.925
WARQ11	.571	.906
WARQ12	.668	.902
WARQ14	.662	.903
WARQ24	.610	.905
WARQ30	.737	.901
WARQ39	.731	.900
WARQ47	.826	.896
WARQ52	.722	.900
WARQ59	.845	.898
WARQ60	.739	.902
WARQ61	.773	.903
Direct Aggression		
27 Items		
(score range 27-189)		
Coefficient $\alpha = .958$		
WARQ4	.564	.957
WARQ7	.561	.957
WARQ13	.632	.956
WARQ14	.674	.956
WARQ19	.684	.956
WARQ24	.615	.957
WARQ27	.612	.957
WARQ30	.753	.956
WARQ31	.648	.956
WARQ38	.652	.956
WARQ39	.687	.956
WARQ40	.745	.956
WARQ41	.660	.957
WARQ47	.801	.955
WARQ48	.664	.956
WARQ49	.766	.955
WARQ50	.700	.956
WARQ52	.757	.955
WARQ53	.780	.955
WARQ54	.587	.957
WARQ55	.618	.957
WARQ56	.679	.956
WARQ57	.651	.956
WARQ58	.772	.955
WARQ59	.845	.955
WARQ60	.723	.956
WARQ61	.757	.956
Total Score		
60 Items		
(score range 60-420)		
Coefficient $\alpha = .976$		

Exploratory Factor Analysis and Internal Consistency Reliability Analysis of

Part V: Turnover Intention

Part V: Turnover Intention scale, developed by Kim, Price, Mueller, and Watson (1996), and adapted for this study, contains five items which measured employees' intention to leave the organization. Respondents were requested to select a response from a five-point Likert scale: 1) *strongly agree*, 2) *agree*, 3) *neither agree nor disagree*, 4) *disagree*, and 5) *strongly disagree* (Kim et al., 1996). Reverse scoring was used for the negative item, TURINT1 *I plan to leave the organization as soon as possible*. With permission from one of the authors, the researcher adapted the scale to add an additional item, TURINT5: *If perpetrator left, I would stay with the organization*. The total score range was 5-25. Higher scores indicated increased propensity of quitting the job. In their 1996 study, Kim et al. examined reliability. The coefficient alpha was .85. In this study, internal consistency reliability using coefficient alpha was estimated for the total turnover intention scale.

Before factor analysis was conducted on the *Turnover Intention* scale, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was conducted resulting in an outcome of .811. Values between .8 and .9 are considered "great" (Field, 2005, p. 650). Bartlett's Test of Sphericity was also conducted resulting in a significance value of .000, which is highly significant, indicating again that factor analysis on the scale is appropriate (Field, 2005). To further establish construct validity of the *Turnover Intention* scale, principal components analysis using varimax rotation was conducted. Exploratory factor analysis (EFA) resulted in one factor emerging from the analysis. Items with eigenvalues greater than 1.0 were used to extract factors. The eigenvalue was 2.990 and the total variance

explained was 59.792% for the unidimensional scale. Factor loadings consisted of 5 items ranging from .615 to .875.

To reduce the number of factors in the analysis and to evaluate the factor loadings in terms of theory and comprehensibility, principal components analysis using varimax rotation was conducted (Garson, 2008). Two factors were extracted for the factor analysis which accounted for 75.418% of the total variance explained. Eigenvalues ranged from 1.562 to 2.209. Generally, a loading of 0.4 is considered satisfactory in research for exploratory purposes (Garson, 2008). The factor item loadings for *Part V: 5-Item Turnover Intention* scale after a two factor extraction is presented in Table 4-7.

Table 4-7

Initial Factor Item Loadings for Part V: 5-Item Turnover Intention Scale After Extraction

Item # Part V: Turnover Intention Scale	Loadings for Factor 1	Loadings for Factor 2
TURINT1	.881	
TURINT4	.814	
TURINT3	.750	
TURINT5		.897
TURINT2		.641

For the 5-item, *Part V: Turnover Intention* scale, the internal consistency reliability was calculated using Cronbach's alpha. For the total scale, the overall Cronbach's Alpha reported was .830. The scale had an internal consistency above the recommended cutoff point of .07 (Field, 2005). The Cronbach's alpha if item deleted for the total scale is presented in Table 4-8.

Table 4-8

Corrected Item-total Correlations and Cronbach's Alpha if Item Deleted for Part V: 5-Item Turnover Intention Scale (Total Scale Coefficient Alpha = .830)

Item # Part V: Turnover Intention Scale	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TURINT1	.595	.807
TURINT2	.580	.811
TURINT3	.758	.758
TURINT4	.768	.753
TURINT5	.459	.838

Prior to answering the research questions and testing hypotheses, reliability and validity analyses were conducted on each of the three scales. This resulted in two revised scales, the *WAR-Q* and the *Turnover Intention* scale. Altogether the three scales, the *Organizational Justice* scale, the revised *WAR-Q*, and the *Turnover Intention* scales were utilized to answer the research questions and test hypotheses. The three scales as a result of EFA and reliability analysis are presented in Table 4-9.

Table 4-9

Revision of Scales Resulting from EFA and Reliability Analysis

Part	Construct	Instrument Name and Developer(s)	Measures	Number of Items and Score Range
III	Organizational Justice	<i>20-Item Organizational Justice Scale Colquitt (2001)</i>	5-point frequency rating Subscales: Procedural Distributive Interpersonal Informational Total Score	20 Items 1-5 scale 20-100 Score Range 7 (1-5) 7-35 4 (1-5) 4-20 4 (1-5) 4-20 5 (1-5) 5-25 20, 20-100

Table 4-9 Continued

Part	Construct	Instrument Name and Developer(s)	Measures	Number of Items and Score Range
IV	Workplace Aggression Behaviors	<i>Revised 60-Item Workplace Aggression Research Questionnaire (WAR-Q)</i> <i>Neuman and Keashly (2004)</i>	7-point frequency rating scale Subscales: Passive Verbal Indirect Active Physical Direct Total Score	60 items 1-7 scale 60-420 Score Range 16, 16-112 29, 29-203 13, 13-91 29, 29-203 13, 13-91 27, 27-189 60, 60-420
V	Turnover Intention	<i>5-Item Turnover Intention Scale</i> <i>Kim, Price, Mueller and Watson (1996)</i>	5-point Likert scale	5 items 1-5 scale 5-25 Score Range

In this study, convergent and divergent validity of the scales were examined through Pearson r correlations. Convergent validity are measures of constructs that theoretically should be related to each other *are* actually related to each other (Trochim, 2006). On the other hand, divergent validity are measures of constructs that theoretically should be not related to each other and after observation, are found *not* to be related to each other (Trochim, 2006). Higher Pearson r correlations typically indicate similar measures are related to each other, while lower correlations indicate dissimilar or divergent relationships.

Convergent validity was established between the *20-item Organizational Justice* scale and its subscales, *Procedural Justice* ($r = .868, p = .000$), *Distributive Justice*

($r = .802, p = .000$), *Interpersonal Justice* ($r = .823, p = .000$), and *Informational Justice* ($r = .789, p = .000$). Convergent validity was also established with the *Turnover Intention* scale ($r = -.360, p = .000$) at a low level.

The *Revised 60-Item Workplace Aggression Research Questionnaire* was significantly and positively related to its six subscales: *passive* ($r = .918, p = .000$), *verbal* ($r = .975, p = .000$), *indirect* ($r = .940, p = .000$), *active* ($r = .894, p = .000$), *physical* ($r = .804, p = .000$), and *direct* ($r = .883, p = .000$). Convergent validity was not established with the *Turnover Intention* scale ($r = .222, p = .002$).

Divergent validity was established between the *20-item Organizational Justice* scale, its four subscales and the *Revised 60-Item Workplace Aggression Research Questionnaire* ($r = -.439, p = .000$), and its six subscales. Results of the Pearson r correlations to establish convergent and divergent validity for the scales in this study are presented in Table 4-10. The scales were modified to reflect the best psychometric qualities for the study. The next steps were to answer the research questions and test the hypotheses.

Table 4-10

Pearson r Correlation Matrix of Study Scales: Convergent and Divergent Validity

Variables	Organizational Justice Total 20-Items	Procedural Justice	Distributive Justice	Interpersonal Justice	Informational Justice	WAR-Q Total	Passive Aggression	Verbal Aggression	Indirect Aggression	Active Aggression	Physical Aggression	Direct Aggression	Turnover Intention
	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>
Organizational Justice Total 20-Items													
Procedural Justice 7 Items	.868 .000												
Distributive Justice 4 Items	.802 .000	.648 .000											
Interpersonal Justice 4 Items	.823 .000	.588 .000	.524 .000										
Informational Justice 5 Items	.789 .000	.497 .000	.476 .000	.695 .000									
WAR-Q Total 60 Items	-.439 .000	-.306 .000	-.336 .000	-.455 .000	-.371 .000								
Passive 16 Items	-.467 .000	-.339 .000	-.397 .000	-.436 .000	-.432 .000	.918 .000							

Table 4-10 Continued

Variables	Organizational Justice Total 20-Items	Procedural Justice	Distributive Justice	Interpersonal Justice	Informational Justice	WAR-Q Total	Passive Aggression	Verbal Aggression	Indirect Aggression	Active Aggression	Physical Aggression	Direct Aggression	Turnover Intention
	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>
Verbal 29 Items	-.491 .000	-.362 .000	-.386 .000	-.484 .000	-.407 .000	.975 .000	.941 .000						
Indirect 13 Items	-.417 .000	-.307 .000	-.339 .000	-.423 .000	-.376 .000	.940 .000	.949 .000	.940 .000					
Active 29 Items	-.291 .000	-.197 .005	-.208 .003	-.345 .000	-.215 .002	.894 .000	.678 .000	.789 .000	.756 .000				
Physical 13 Items	-.195 .005	-.118 .083	-.138 .040	-.244 .000	-.177 .009	.804 .000	.621 .000	.665 .000	.686 .000	.923 .000			
Direct 27 Items	-.281 .000	-.192 .006	-.209 .003	-.342 .000	-.208 .003	.883 .000	.669 .000	.776 .000	.734 .000	.995 .000	.933 .000		
Turnover Intention 5 Items	-.360 .000	-.312 .000	-.308 .000	-.316 .000	-.296 .000	.222 .002	.264 .000	.249 .000	.230 .001	.159 .023	.121 .073	.156 .026	

Research Questions

Research Question 1

What are employee demographic characteristics, work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), frequency of aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave?

Employee demographic characteristics. Descriptive statistics were used to answer Research Question 1. This included measures of central tendency (the mean), frequency distributions, and variability to describe the variables of employee demographic characteristics and work profiles. The final data producing sample was 241 respondents. The telecom employees' ages ranged from 18 to 58 years and above. The majority of the respondents were in the age category of 50 to 57 years (24.9%) and 42 to 49 years (22.4%). Of the telecom employees who completed the survey, 38.2% were female and 61.8% were male. A large amount of the employees were white (89.6%). Black or African American employees represented 5.4%, American Indian or Alaska Native .4%, while Asian employees represented 2.9% of the sample. Three respondents replied to "Race Other" and wrote in "Hispanic" (1.3%). One respondent wrote in "Hispanic Mixed" which represented 0.4%. The sample was overwhelmingly "Not Hispanic or Latino" (93.4%), while 6.6% were Hispanic or Latino. The majority of the respondents (62.2%) had a college education, although 27.0% of the employees had an educational level limited to high school. The frequency distributions of telecom employee demographic characteristics such as age, gender, race, ethnicity, and educational level are presented in Table 4-11.

Table 4-11

Demographic Characteristics of Telecommunications Employees by Age, Gender, Race, Ethnicity and Highest Level of Education (N = 241)

Demographic Characteristics	Frequency	Valid Percent
Age		
18 to 25	14	5.8%
26 to 33	31	12.9%
34 to 41	52	21.6%
42 to 49	54	22.4%
50 to 57	60	24.9%
58 and above	30	12.4%
Gender		
Male	149	61.8%
Female	92	38.2%
Race		
White	216	89.6%
Black or African American	13	5.4%
American Indian/Alaskan Native	1	.4%
Asian	7	2.9%
Native Hawaiian/Other Pacific Islander	0	0%
Other (Hispanic and Mixed Hispanic)	4	1.7%
Ethnicity		
Hispanic or Latino	16	6.6%
Not Hispanic or Latino	225	93.4%
Highest Level of Education		
High School	65	27.0%
College	150	62.2%
Graduate School	26	10.8%

Employee work profile characteristics. The frequency distributions of telecommunications employee work profile characteristics such as seniority, job category (management or non-management), number of employees supervised (if management), supervisory level, number of employees at work location, and telecom sector (wireline, wireless, cable, or satellite telecommunications) are presented in Table 4-12. Most of the telecom employees had between 2 to 5 years seniority (26.1%). Non-management employees represented 67.2% of the sample while management workers represented 32.8%.

The majority of management employees supervised 1 to 15 employees (14.5%). Of the supervisory level category, Team Leaders represented 14.0%, followed by 13.3% of managers who oversee first line supervisors. Employees who worked in locations of 250 or more workers represented 40.7% of the sample. Wireline employees represented 49.4%, wireless 25.3%, cable and other program distributors 17.4%, and satellite telecommunications workers represented 7.9% of the total telecommunications sector.

Table 4-12

Telecommunications Employee Work Profile Characteristics (N = 241)

Work Profile Characteristic	Frequency	Valid Percent
Seniority		
Less than one year	14	5.8%
2 to 5 years	63	26.1%
6 to 10 years	56	23.2%
11 to 15 years	39	16.2%
16 to 22 years	17	7.1%
23 to 30 years	30	12.4%
Over 31 years	22	9.2%
Job Category		
Non-Management	162	67.2%
Management	79	32.8%
Number of Employees Supervised		
0	178	73.9%
1 to 15 Employees	35	14.5%
16 to 50 Employees	18	7.5%
Over 51 Employees	10	4.1%
Supervisory Level		
None	151	62.7%
Team Leader	34	14.0%
First Line Supervisor	18	7.5%
Manager (Oversee First Line)	32	13.3%
Executive (VP Level and Higher)	6	2.5%
Number of Employees at Work Location		
1 to 4	20	8.3%
5 to 49	43	17.8%
50 to 249	80	33.2%
250 or more	98	40.7%
Telecommunications Sector		
Wireline telecommunications	119	49.4%
Wireless telecommunications	61	25.3%
Cable and other program distributors	42	17.4%
Satellite and telecommunications resellers	19	7.9%

The frequency distributions of telecommunications employees work profiles categorized by management and non-management workers are illustrated in Table 4-13. Work profile characteristics such as seniority, number of employees supervised (if management), supervisory level, number of employees at work location, and telecom sector (wireline, wireless, cable, or satellite telecommunications) are presented. Managers (those who oversee first line supervisors) represented 39.2%, while executive (VP level and higher) was 7.6% of the sample. Most of the management employees supervised between *1 to 15 Employees* (41.8%).

Of the non-management employees, a large amount had between *2 to 5 years* (30.2%) seniority with their organization and 6.2% had over 31 years. The majority of management employees had between *6 to 10 years* (21.5%) seniority, and only one management employee had less than one year (1.3%). The wireline telecommunications sector represented the majority of both management and non-management respondents at 54.4% and 46.9% respectively. Management and non-management employees, who worked in locations of 250 or more workers, represented 45.6% and 38.3% of the sample.

Table 4-13

Telecommunications Employee Work Profiles Itemized by Management and Non-Management Workers (N = 241)

Work Profile Variables	Management Frequency	Management Valid Percent	Non-Management Frequency	Non-Management Valid Percent
Supervisory Level				
None	17	21.5%	134	82.7%
Team Leader	8	10.2%	26	16.1%
First Line Supervisor	17	21.5%	1	.6%
Manager (Oversee First Line)	31	39.2%	1	.6%
Executive (VP Level and Higher)	6	7.6%	0	0
Number of Employees Supervised				
0	25	31.6%	153	94.5%
1 to 15 Employees	33	41.8%	2	1.2%
16 to 50 Employees	16	20.3%	2	1.2%
Over 51 Employees	5	6.3%	5	3.1%

Table 4-13 Continued

Work Profile Variables	Management Frequency	Management Valid Percent	Non-Management Frequency	Non-Management Valid Percent
Seniority				
Less than one year	1	1.3%	13	8.0%
2 to 5 years	14	17.7%	49	30.2%
6 to 10 years	17	21.5%	39	24.1%
11 to 15 years	16	20.3%	23	14.2%
16 to 22 years	6	7.6%	11	6.8%
23 to 30 years	13	16.5%	17	10.5%
Over 31 years	12	15.1%	10	6.2%
Telecom Sector				
Wireline telecommunications	43	54.4%	76	46.9%
Wireless telecommunications	22	27.8%	39	24.1%
Cable and other program distributors	7	8.9%	35	21.6%
Satellite and telecommunications resellers	7	8.9%	12	7.4%
Number of Employees at Work Location				
1 to 4	10	12.6%	10	6.2%
5 to 49	12	15.2%	31	19.1%
50 to 249	21	26.6%	59	36.4%
250 or more	36	45.6%	62	38.3%

Perceptions of organizational justice descriptive analysis. The *Organizational Justice* scale resulting from exploratory analysis is presented in Table 4-14. All 20 items are rated on a 5-point frequency rating of 1) *to a very small extent*, 2) *to a small extent*, 3) *neutral*, 4) *to a large extent*, and 5) *to a very large extent*. Higher scores indicated increased perceptions of justice and equitable treatment, lower scores represented unjust and unfair treatment. The score range for the total scale is 20-100. There are four subscales: *procedural justice* (7 items, with a score range of 7-35), *distributive justice* (4 items, with a score range of 4-20), *interpersonal justice* (4 items, with a score range of 4-20), and *informational justice* (5 items, with a score range of 5-25).

The lowest average *procedural justice* score was item PJ2, “Have you had influence over the outcomes arrived by those procedures?” at 2.78. The highest average

procedural justice score was 3.59 for item PJ7, “Have those procedures upheld ethical and moral standards?” The lowest average *distributive justice* score was item DJ3, “Does your outcome reflect what you have contributed to the organization?” at 3.31. The highest average *distributive justice* score was 3.56 for item DJ2, “Is your outcome appropriate for the work you have completed?” The lowest average *interpersonal justice* score was 3.80 for item IP3, “Has she/he treated you with respect”? The highest average *interpersonal justice* score was 3.89 for item IP1, “Has she/he treated you in a polite manner?” The highest average *informational justice* score was 3.62 for item IF1, “Has she/he been candid in his/her communications with you?” The lowest average *informational justice* score was 3.26 for item IF5, “Has he/she seemed to tailor his/her communications to individuals’ specific needs?” Average item scores for the *20-Item Organizational Justice* scale ranged from 2.78 to 3.89.

Table 4-14

Mean Scale and Average Item Scores for the 20-Item Organizational Justice Scale

Scale/Item	N	1 To a very small extent	2 To a small extent	3 Neutral	4 To a large extent	5 To a very large extent	Average Item Score
Procedural Justice 7 items (Subscale score range 7-35)							
PJ1 Have you been able to express your views and feelings during these procedures?	240	12.1%	25.4%	22.5%	30.4%	9.6%	3.00
PJ2 Have you had influence over the outcomes arrived by those procedures?	240	14.6%	27.5%	29.6%	22.0%	6.3%	2.78

Table 4-14 Continued

Scale/Item	N	1 To a very small extent	2 To a small extent	3 Neutral	4 To a large extent	5 To a very large extent	Average Item Score
PJ3 Have all those procedures been applied consistently?	239	12.6%	22.6%	33.5%	25.0%	6.3%	2.90
PJ4 Have those procedures been free of bias?	238	10.1%	14.3%	37.8%	29.0%	8.8%	3.12
PJ5 Have those procedures been based on accurate information?	238	7.6%	13.9%	32.4%	36.0%	10.1%	3.27
PJ6 Have you been able to appeal the outcomes arrived at by those procedures?	241	14.1%	18.3%	44.8%	19.9%	2.9%	2.79
PJ7 Have those procedures upheld ethical and moral standards?	239	6.3%	9.2%	28.9%	30.5%	25.1%	3.59
Procedural Justice Total Score							21.51
Distributive Justice 4 items (Subscale score range 4-20)							
DJ1 Does your outcome reflect the effort you have put into your work?	238	5.9%	14.7%	20.6%	41.2%	17.6%	3.50
DJ2 Is your outcome appropriate for the work you have completed?	239	4.2%	12.1%	24.7%	41.4%	17.6%	3.56
DJ3 Does your outcome reflect what you have contributed to the organization?	239	9.2%	18.0%	20.1%	38.1%	14.6%	3.31
DJ4 Is your outcome justified given your performance?	241	7.9%	11.2%	25.7%	41.5%	13.7%	3.42
Distributive Justice Total Score							13.82

Table 4-14 Continued

Scale/Item	N	1 To a very small extent	2 To a small extent	3 Neutral	4 To a large extent	5 To a very large extent	Average Item Score
Interpersonal Justice 4 items (Subscale score range 4-20)							
IP1 Has he/she treated you in a polite manner?	240	3.3%	8.8%	15.8%	39.6%	32.5%	3.89
IP2 Has he/she treated you with dignity?	241	4.6%	9.1%	15.8%	40.2%	30.3%	3.83
IP3 Has he/she treated you with respect?	241	6.2%	7.9%	16.6%	37.8%	31.5%	3.80
IP4 Has he/she refrained from improper remarks or comments?	238	5.9%	7.6%	17.1%	34.5%	34.9%	3.85
Interpersonal Justice Total Score							15.37
Informational Justice 5 items (Subscale score range 5-25)							
IF1 Has he/she been candid in his/her communications with you?	240	3.3%	12.1%	22.5%	43.3%	18.8%	3.62
IF2 Has he/she explained the procedures thoroughly?	234	4.7%	11.1%	23.1%	45.7%	15.4%	3.56
IF3 Were his/her explanations regarding the procedures reasonable?	238	3.8%	13.0%	27.3%	42.9%	13.0%	3.48
IF4 Has he/she communicated details in a timely manner?	237	6.8%	15.1%	24.9%	38.4%	14.8%	3.39
IF5 Has he/she seemed to tailor his/her communications to individuals' specific needs?	239	8.8%	15.1%	31.4%	30.5%	14.2%	3.26
Informational Justice Total Score							17.36

The lowest average item mean score was 3.07 for the *procedural justice* subscale. The highest average item mean score was 3.84 for the *interpersonal justice* subscale. The average item mean score for the total scale was 3.42. The subscale mean scores were: *procedural justice* 21.51 (score range 7-35), *distributive justice* 13.82 (score range 4-20), *interpersonal justice* 15.37 (score range 4-20), and *informational justice* 17.36 (score range 5-25). The standard deviations for the subscales were: *procedural justice* 6.12, *distributive justice* 4.01, *interpersonal justice* 4.07 and *informational justice* 4.48 indicating that the scores cluster close to the mean. The total scale mean score was 68.38 (score range 20-100). The average item mean, subscale, and total scale scores for the 20-Item Organizational Justice scale are presented in Table 4-15.

Table 4-15

Average Item Mean, Subscale, and Total Scale Scores for the 20-Item Organizational Justice Scale

Scale	N	Average Item Mean	Subscale and Total Scale Mean Score
Procedural Justice Subscale (7 Items, Score Range 7-35)	230	3.07	21.51
Distributive Justice Subscale (4 Items, Score Range 4-20)	235	3.46	13.82
Interpersonal Justice Subscale (4 items, Score Range 4-20)	237	3.84	15.37
Informational Justice Subscale (5 Items, Score Range 5-25)	229	3.47	17.31
Total 20-Item Scale (Score Range 20-100)	213	3.42	68.38

Frequency of aggression behaviors descriptive analysis. The *Workplace Aggression Research Questionnaire (WAR-Q)* resulting from exploratory analysis is presented in Table 4-16. The WAR-Q includes 60 items which measure frequency of

workplace aggression behaviors. Six subscales of aggression behaviors (passive, active, verbal, physical, direct, and indirect) are analyzed. All items of the WAR-Q are rated on a 7-point frequency rating scale of 1) *never*, 2) *once*, 3) *a few times*, 4) *several times*, 5) *monthly*, 6) *weekly*, and 7) *daily*. Higher scores indicated greater frequency of exposure to aggression behaviors. The six subscales of the *Workplace Aggression Research Questionnaire* scale are as follows: *verbal aggression* (29-items), *physical aggression* (13-items), *active aggression* (29-items), *passive aggression* (16-items), *direct aggression* (27-items), and *indirect aggression* (13-items), resulting in a 60-item scale. The score range for the total scale is 60-420. All 60-items within the WAR-Q analyze more than one subscale. For example, item WARQ14 “Been subjected to obscene or hostile gestures” measures *active*, *physical*, and *direct* aggression behaviors.

The lowest average *verbal aggression* score was item WARQ31 “Been subjected to derogatory name calling” at 1.36. The highest average *verbal aggression* score was item WARQ9 “Not been given the praise for which you felt entitled” at 2.95. The lowest average *physical aggression* score was item WARQ60 “Been raped or sexually assaulted” at 1.06. The highest average *physical aggression* score was item WARQ5 “Had others consistently arrive late for meetings that you called” at 1.78. The lowest average *active aggression* score was item WARQ60 “Been raped or sexually assaulted” at 1.06. The highest average *active aggression* score was item WARQ33 “Been the target of rumors or gossip” at 1.72. The lowest average *passive aggression* score was item WARQ4 “Had others storm out of the work area when you entered” at 1.24. The highest average *passive aggression* score was item WARQ9 “Not been given the praise for which you felt entitled” at 2.95. The lowest average *direct aggression* score was item

WARQ60 “Been raped or sexually assaulted” at 1.06. The highest average *direct aggression* score items WARQ19 “Been yelled at or shouted at in a hostile manner” and WARQ41 “Been subjected to temper tantrums when disagreeing with someone”, both scoring 1.64. The lowest average *indirect aggression* score was item WARQ16 “Had others fail to deny false rumors about you” at 1.45. The highest average *indirect aggression* score was item WARQ26 “Had others fail to give you information that you really needed” at 2.64. Average item scores for the 60-item *Workplace Aggression Research Questionnaire* ranged from 1.06 to 2.95.

Table 4-16

Mean Scale and Average Item Scores for the 60-Item Workplace Aggression Research Questionnaire (WAR-Q)

Scale/Item	N	1 Never	2 Once	3 A Few Times	4 Several	5 Monthly	6 Weekly	7 Daily	Average Item Score
WARQ2 Been glared at in a hostile manner	240	56.3%	10.8%	20.4%	5.4%	2.1%	2.1%	2.9%	2.04
WARQ3 Been excluded from work-related social gatherings	241	69.3%	5.4%	15.8%	7.5%	.8%	.4%	.8%	1.70
WARQ4 Had others storm out of the work area when you entered	239	87%	5%	5.9%	1.3%	.8%	0%	0%	1.24
WARQ5 Had others consistently arrive late for meetings that you called	241	66.0%	4.6%	21.6%	4.6%	.8%	2%	.4%	1.78
WARQ6 Been sworn at in a hostile manner	240	77.5%	7.9%	10.0%	1.3%	.8%	.8%	1.7%	1.49
WARQ7 Been subjected to negative comments about your religious beliefs	240	88.3%	2.9%	5.0%	2.5%	.4%	.4%	.5%	1.27
WARQ8 Been given the “silent” treatment	241	58.9%	7.9%	24.5%	5.0%	1.2%	.4%	2.1%	1.91

Table 4-16 Continued

Scale/Item	N	1 Never	2 Once	3 A Few Times	4 Several	5 Monthly	6 Weekly	7 Daily	Average Item Score
WARQ9 Not been given the praise for which you felt entitled	239	28.9%	5.9%	34.3%	18.4%	2.5%	5.0%	5.0%	2.95
WARQ10 Been treated in a rude and/or disrespectful manner	241	49.0%	11.2%	25.7%	7.5%	1.7%	2.5%	2.4%	2.19
WARQ11 Had your property defaced, damaged, or stolen	240	80.4%	8.8%	7.5%	2.1%	.8%	.4%	0%	1.35
WARQ12 Had others fail to take action to protect you from harm	241	84.6%	4.1%	7.9%	2.1%	.8%	.4%	.1%	1.32
WARQ13 Been subjected to negative comments about a disability	237	86.5%	4.2%	5.1%	2.5%	1.3%	.4%	0%	1.29
WARQ14 Been subjected to obscene or hostile gestures	238	83.2%	4.2%	8.8%	1.3%	.8%	1.3%	.4%	1.38
WARQ15 Had others refuse your requests for assistance	239	62.8%	7.9%	18.8%	4.2%	2.9%	1.3%	2.1%	1.89
WARQ16 Had others fail to deny false rumors about you	238	79.0%	5.0%	10.9%	2.5%	2.1%	.1%	.4%	1.45
WARQ17 Been given little or no feedback about your performance	239	44.8%	5.4%	30.5%	8.8%	3.3%	3.3%	3.9%	2.46
WARQ18 Had others delay action on matters that were important to you	239	36.4%	10.0%	33.1%	11.7%	3.8%	3.3%	1.7%	2.53
WARQ19 Been yelled at or shouted at in a hostile manner	241	68.9%	10.8%	14.1%	2.9%	.8%	2.1%	.4%	1.64
WARQ20 Been subjected to negative comments about your intelligence or competence	240	70.4%	7.9%	15.4%	2.5%	.8%	1.7%	1.3%	1.65

Table 4-16 Continued

Scale/Item	N	1 Never	2 Once	3 A Few Times	4 Several	5 Monthly	6 Weekly	7 Daily	Average Item Score
WARQ21 Had others consistently fail to return your telephone calls and/or respond to your memos or e-mail	241	45.6%	7.9%	31.1%	7.1%	3.3%	2.5%	2.5%	2.32
WARQ22 Had your contributions ignored by others	237	43.9%	8.9%	30.8%	8.9%	1.7%	2.5%	3.3%	2.37
WARQ23 Had someone interfere with your work activities	240	59.2%	6.3%	22.5%	5.0%	1.3%	2.9%	2.8%	2.03
WARQ24 Been subjected to mean pranks	241	83.8%	5.0%	7.9%	1.7%	.4%	.4%	.8%	1.34
WARQ25 Been lied to	240	43.8%	6.7%	31.7%	9.6%	2.5%	2.1%	3.6%	2.42
WARQ26 Had others fail to give you information that you really needed	240	35.0%	5.0%	40.4%	10.0%	2.9%	3.8%	2.9%	2.64
WARQ27 Been subjected to threats and/or harassment for "blowing the whistle" about activities at work	239	88.3%	4.6%	3.8%	2.1%	.8%	.4%	0%	1.24
WARQ28 Had others fail to warn you about impending dangers	241	79.7%	3.3%	10.8%	4.6%	.8%	.4%	.4%	1.46
WARQ29 Been denied a raise or promotion without being given a valid reason	241	72.2%	14.1%	7.9%	5.0%	.8%	0%	0%	1.48
WARQ30 Had signs or notes left that embarrassed you	239	90.4%	2.5%	5.4%	1.3%	.4%	0%	0%	1.19
WARQ31 Been subjected to derogatory name calling	240	82.5%	5.8%	7.9%	2.1%	.8%	.4%	.5%	1.36

Table 4-16 Continued

Scale/Item	N	1 Never	2 Once	3 A Few Times	4 Several	5 Monthly	6 Weekly	7 Daily	Average Item Score
WARQ32 Been blamed for other peoples' mistakes	241	58.1%	9.1%	21.6%	5.4%	2.5%	1.7%	1.6%	1.97
WARQ33 Been the target of rumors or gossip	241	68.9%	6.6%	15.6%	4.6%	1.7%	1.7%	.9%	1.72
WARQ34 Shown little empathy/sympathy when you were having a tough time	239	60.7%	8.8%	19.7%	4.6%	3.3%	1.7%	1.2%	1.91
WARQ35 Had co-workers fail to defend your plans or ideas to others	238	69.3%	5.9%	17.2%	3.8%	2.5%	.8%	.5%	1.68
WARQ36 Been given unreasonable workloads or deadlines— more than others	241	54.4%	6.2%	22.8%	7.1%	2.5%	3.7%	3.3%	2.22
WARQ37 Had others destroy or needlessly take resources that you needed to do your job	241	80.1%	4.3%	9.1%	3.7%	1.2%	.8%	.8%	1.48
WARQ38 Been accused of deliberately making an error	239	79.9%	5.4%	7.5%	3.8%	.8%	2.5%	.1%	1.48
WARQ39 Been subjected to unwanted attempts to touch, fondle, kiss or grab you	240	90.8%	2.9%	2.5%	1.7%	1.7%	.4%	0%	1.22
WARQ40 Been subjected to threats to reveal private or embarrassing information about you to others	239	92.5%	2.9%	2.1%	1.7%	.8%	0%	0%	1.15
WARQ41 Been subjected to temper tantrums when disagreeing with someone	239	70.3%	10.5%	12.1%	2.9%	1.7%	1.7%	.8%	1.64
WARQ42 Been prevented from expressing yourself (e.g., interrupted when speaking)	239	50.2%	5.9%	29.3%	6.7%	1.7%	2.9%	3.3%	2.26

Table 4-16 Continued

Scale/Item	N	1 Never	2 Once	3 A Few Times	4 Several	5 Monthly	6 Weekly	7 Daily	Average Item Score
WARQ43 Had attempts made to turn other employees against you	241	77.2%	5.4%	10.4%	3.7%	1.2%	1.2%	.9%	1.54
WARQ44 Had someone flaunt his/her status or treat you in a condescending manner	240	64.6%	7.1%	17.1%	5.0%	1.7%	1.3%	3.2%	1.89
WARQ45 Been subjected to excessively harsh criticism about your work	241	73.9%	5.0%	10.4%	3.7%	2.1%	2.9%	2.0%	1.72
WARQ46 Had someone else take credit for your work or ideas	239	52.7%	10.0%	28.0%	5.0%	2.9%	.6%	.8%	2.00
WARQ47 Been kicked, bitten, or spat on	240	95.4%	.4%	2.1%	1.7%	.4%	0%	0%	1.13
WARQ48 Been criticized for non-work (personal) life and activities	240	81.7%	4.6%	6.3%	2.5%	.8%	1.3%	.8%	1.43
WARQ49 Been subjected to negative comments about your sexual orientation	241	94.2%	1.2%	1.2%	1.7%	1.2%	.4%	.1%	1.16
WARQ50 Been subjected to racist remarks	238	88.7%	4.2%	4.2%	1.3%	1.3%	.3%	0%	1.24
WARQ51 Been reprimanded or "put down" in front of others	240	70.4%	9.2%	12.9%	3.3%	1.3%	2.1%	.8%	1.65
WARQ52 Had someone hit you with an object	240	92.9%	2.5%	2.1%	.8%	.8%	.8%	.1%	1.17
WARQ53 Been subjected to ethnic or racial jokes or slurs	241	85.5%	4.1%	7.1%	.8%	1.7%	.8%	0%	1.32
WARQ54 Been told how to spend your personal time when not at work	238	86.1%	2.1%	6.3%	3.8%	1.3%	.4%	0%	1.33

Table 4-16 Continued

Scale/Item	N	1 Never	2 Once	3 A Few Times	4 Several	5 Monthly	6 Weekly	7 Daily	Average Item Score
WARQ55 Been subjected to unwanted terms of endearment	241	87.1%	3.7%	7.5%	.4%	1.2%	0%	.1%	1.25
WARQ56 Been subjected to suggestive and/or offensive stories	241	74.7%	5.8%	13.3%	3.3%	.8%	.4%	1.7%	1.58
WARQ57 Been subjected to sexist remarks	241	82.6%	2.1%	11.2%	1.2%	.8%	.4%	1.7%	1.44
WARQ58 Been threatened with physical harm	240	89.2%	5.0%	3.3%	1.3%	1.2%	0%	0%	1.20
WARQ59 Been pushed, shoved, thrown, or bumped into with unnecessary force	241	92.9%	2.5%	2.5%	1.7%	.4%	0%	0%	1.14
WARQ60 Been raped or sexually assaulted	239	97.1%	.8%	.8%	0%	.8%	.4%	.1%	1.06
WARQ61 Been assaulted with a weapon or other dangerous object	240	97.1%	.8%	.4%	1.3%	.4%	0%	0%	1.07

The lowest average item mean score was 1.26 for the *physical aggression* subscale. The highest average item mean score was 2.01 for the *passive aggression* subscale. The average item mean score for the total scale was 1.68. The subscale mean scores were: *passive aggression* 32.09 (score range 16-112), *verbal aggression* 55.28 (score range 29-203), *indirect aggression* 24.27 (score range 13-91), *active aggression* 38.25 (score range 29-203), *physical aggression* 16.33 (score range 13-91), and *direct aggression* 35.03 (score range 27-189). The standard deviations for the subscales were:

passive aggression 14.59, *verbal aggression* 27.98, *indirect aggression* 11.38, *active aggression* 17.61, *physical aggression* 7.03, and *direct aggression* 15.96 indicating that the scores cluster close to the mean. The total scale mean score was 100.63 (score range 60-420). The average item mean, subscale, and total scale scores for the *60-Item Workplace Aggression Research Questionnaire (WAR-Q)* are presented in Table 4-17.

Table 4-17

Average Item Mean, Subscale, and Total Scale Scores for the 60-Item Workplace Aggression Research Questionnaire (WAR-Q)

Scale	N	Average Item Mean	Subscale and Total Scale Mean Score
Passive Aggression Subscale (16 Items, Score Range 16-112)	220	2.01	32.09
Verbal Aggression Subscale (29 Items, Score Range 29-203)	214	1.91	55.28
Indirect Aggression Subscale (13 items, Score Range 13-91)	229	1.87	24.27
Active Aggression Subscale (29 Items, Score Range 29-203)	212	1.32	38.25
Physical Aggression Subscale (13 Items, Score Range 13-91)	227	1.26	16.33
Direct Aggression Subscale (27 Items, Score Range 27-189)	211	1.30	35.03
Total Score (60-Items, Score Range 60-420)	193	1.68	100.63

Research has revealed that approximately one in ten individuals were victims of workplace bullying (Matthiesen & Einarsen, 2007; Namie & Namie 2000). To constitute bullying, aggressive episodes must occur frequently, at least weekly or more. Most researchers disregard one-time episodes of aggression as bullying incidents (Einarsen, et al., 2003; Leymann, 1990; Rayner, Hoel, & Cooper, 2002; Salin, 2003). According to Namie and Namie (2000), “bullying encompasses all types of mistreatment at work. All harassment is bullying as long as the actions have the effect, intended or not, of hurting the target” (p. 3).

To further analyze the ratio of *workplace aggression behaviors* to this study's population sample of telecommunications workers (241 participants), a frequency distribution analysis was performed using the 60-item *Workplace Aggression Research Questionnaire (WAR-Q)*. The *WAR-Q* included 7 responses: 1-*never*, 2-*once*, 3-*a few times*, 4-*several*, 5-*monthly*, 6-*weekly*, and 7-*daily*. Since the definition of workplace bullying is frequent aggressive behavior that occurs on a regular basis, response items 1-*never* and 2-*once* were manually subtracted from the frequency analysis for each *WAR-Q* item. The frequency scores for the 60-item *WAR-Q* totaled 3050. The total frequency score was then divided by the total number of *WAR-Q* items, ($3050 \div 60 = 50.83$) to get an average for each *WAR-Q* survey item. The resulting frequency average for each item was 50.83 which was then divided into the total number of respondents, 241 resulting in 4.74 ($50.83 \div 241 = 4.74$). Of the telecommunications workers sampled for this study, 1 in 5 employees or 21% reported frequent experiences with workplace aggression behaviors.

Intention to leave descriptive analysis. The *Turnover Intention* scale included five items which measured employees' intention to leave the organization. Respondents were requested to select a response from a five-point Likert scale: 1) *strongly agree*, 2) *agree*, 3) *neither agree nor disagree*, 4) *disagree*, and 5) *strongly disagree*. Reverse scoring was used for the negative item, TURINT1 *I plan to leave the organization as soon as possible*, so that 1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, 5 = *strongly agree*. With permission from one of the authors, the researcher adapted the scale to add an additional item, TURINT5: *If perpetrator left, I would stay with the organization*. The total score range was 5-25. Higher scores

indicated increased propensity of quitting the job. The lowest average *Turnover Intention* score was item TURINT1, “I plan to leave the organization as soon as possible,” at 2.21. The highest average *Turnover Intention* score was item TURINT2, “Under no circumstance will I voluntarily leave the organization.” at 2.85. The *Turnover Intention* scale, resulting from exploratory analysis is presented in Table 4-18.

Table 4-18

Mean Scale and Average Item Scores for the 5-Item Turnover Intention Scale

Item	N	1 Strongly Agree	2 Agree	3 Neither Agree Nor Disagree	4 Disagree	5 Strongly Disagree	Average Item Score
TURINT1 I plan to leave the organization as soon as possible. (Item Reverse Scored)	241	10.8%	6.2%	21.6%	16.2%	45.2%	2.21
TURINT2 Under no circumstance will I voluntarily leave the organization.	240	13.3%	17.5%	31.3%	16.3%	21.6%	2.85
TURINT3 I would be reluctant to leave the organization.	238	10.2%	6.8%	24.2%	30.8%	28.0%	2.40
TURINT4 I plan on staying with the organization as long as possible.	240	10.8%	6.7%	18.3%	27.5%	36.7%	2.28
TURINT5 If perpetrator left, I would stay with the organization.	238	5.9%	2.5%	63.4%	12.6%	15.6%	2.71
Turnover Intention Total Score							12.44

Research Question 2

Are there differences in work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave according to employee demographic characteristics?

Differences in work profiles, perceptions of organizational justice, workplace aggression behaviors, and intention to leave were analyzed according to employee

demographic characteristics (age, gender, race, ethnicity, and highest level of education). The 20-item *Organizational Justice* scale, the 60-item *Workplace Aggression Research Questionnaire (WAR-Q)*, and the 5-item *Turnover Intention* scale were used. To examine differences in work profile variables of *seniority*, *number of employees supervised*, *supervisory level*, and *number of employees at work location*, t-tests and ANOVA were used. Differences in categorical work profile variables (job category and telecom sector) were analyzed using Chi-square. Differences in organizational justice, workplace aggression, and intention to leave were analyzed using either Independent *t*-tests (gender and ethnicity) or ANOVA (age, race, and highest level of education).

Tukey's tests were used as post hoc comparisons when significant *F* values resulted from ANOVA analyses. This provided a comparison control for Type I errors by correcting the level of significance for each test (Field, 2005). According to Field (2005) a Type I error, also known as a false positive, "occurs when we believe that there is a genuine effect in our population" (p. 748), when in reality none exists. Tukey's test compares the largest mean with the smallest mean, and then continues to compare the largest mean to the next smallest mean until no significant difference was found.

Differences in Work Profiles According to Age

There was a significant effect of *Age* on *Seniority* ($p = .000$) *Seniority* was significantly higher ($p = .000$) for employees in the *50 to 57* age group ($M = 4.87$). There was also a significant effect of *Age* on *Number of Employees at Work Location* ($p = .049$). *Number of Employees at Work Location* was significantly higher for employees aged *18 to 25* ($M = 3.50$), than for almost all the groups ($p = < .05$). Although not significant, a trend relationship resulted between *Age* and *Procedural Justice* ($p = .074$).

Procedural Justice was higher in the 42 to 49 Age group (M = 22.94), followed by the 26 to 33 Age group (M = 22.00), and the 50 to 57 Age group (M = 21.98).

There was also a significant effect of *Age* on *Intention to Leave* ($p = .007$). *Intention to Leave* was significantly higher for employees aged 18 to 25 (M = 16.58), than the 26 to 33 age group ($p = .034$), and the 50 to 57 age group ($p = .004$). Results of ANOVA of comparison of employee work profiles, *Organizational Justice*, *Workplace Aggression* and *Intention to Leave* according to *Age* are shown in Table 4-19.

Table 4-19

Comparison of Employee Work Profiles, Organizational Justice, Workplace Aggression Behaviors, and Intention to Leave According to Age: (N=241)
ANOVA and Post Hoc Comparisons

Variable and Age Group	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
Seniority				5	19.202	.000	
18 to 25	14	2.00					
26 to 33	31	2.65					
34 to 41	52	2.83					
42 to 49	54	3.69					
50 to 57	60	4.87					
58 and above	30	4.50					
50 to 57 > 18 to 25			2.87				.000
50 to 57 > 26 to 33			2.22				.000
50 to 57 > 34 to 41			2.04				.000
50 to 57 > 42 to 49			1.18				.001
Number of Employees Supervised				5	1.002	.417	
18 to 25	14	1.64					
26 to 33	31	1.39					
34 to 41	52	1.54					
42 to 49	54	1.44					
50 to 57	60	1.25					
58 and above	30	1.43					
Supervisory Level				5	1.776	.118	
18 to 25	14	1.21					
26 to 33	31	1.55					
34 to 41	52	1.85					
42 to 49	54	1.98					
50 to 57	60	1.67					
58 and above	30	2.10					

Table 4-19 Continued

Variable and Age Group	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
Number of Employees at Work							
Location							
18 to 25	14	3.50		5	2.261	.049	
26 to 33	31	3.13					
34 to 41	52	3.31					
42 to 49	54	2.93					
50 to 57	60	2.83					
58 and above	30	3.07					
18 to 25 > 26 to 33			.371				.827
18 to 25 > 34 to 41			.192				.984
18 to 25 > 42 to 49			.574				.331
18 to 25 > 50 to 57			.667				.169
18 to 25 > 58 and above			.433				.717
Organizational Justice (Total Scale)							
18 to 25	13	62.54		5	1.016	.409	
26 to 33	29	69.34					
34 to 41	42	67.12					
42 to 49	51	71.67					
50 to 57	51	68.02					
58 and above	27	66.56					
Procedural Justice							
18 to 25	13	17.62		5	2.038	.074	
26 to 33	30	22.00					
34 to 41	51	20.59					
42 to 49	51	22.94					
50 to 57	56	21.98					
58 and above	29	20.97					
Distributive Justice							
18 to 25	14	12.29		5	.880	.495	
26 to 33	30	14.27					
34 to 41	50	13.34					
42 to 49	54	14.13					
50 to 57	58	14.26					
58 and above	29	13.45					
Interpersonal Justice							
18 to 25	14	3.50		5	.428	.829	
26 to 33	30	3.13					
34 to 41	50	3.31					
42 to 49	54	2.93					
50 to 57	59	2.83					
58 and above	30	3.07					
Informational Justice							
18 to 25	14	16.86		5	.544	.743	
26 to 33	31	17.00					
34 to 41	46	17.17					
42 to 49	52	18.15					
50 to 57	58	17.43					
58 and above	28	16.68					

Table 4-19 Continued

Variable and Age Group	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
WAR-Q (Total Score)				5	1.314	.260	
18 to 25	12	111.25					
26 to 33	21	121.19					
34 to 41	42	93.33					
42 to 49	47	96.70					
50 to 57	46	100.96					
58 and above	25	97.32					
Verbal Aggression				5	1.083	.371	
18 to 25	13	63.23					
26 to 33	25	64.60					
34 to 41	47	51.89					
42 to 49	51	51.59					
50 to 57	51	55.49					
58 and above	27	55.30					
Physical Aggression				5	1.587	.165	
18 to 25	13	17.31					
26 to 33	28	19.29					
34 to 41	48	14.98					
42 to 49	53	16.19					
50 to 57	57	16.53					
58 and above	28	15.14					
Active Aggression				5	1.447	.209	
18 to 25	12	42.17					
26 to 33	24	45.83					
34 to 41	45	35.13					
42 to 49	51	37.94					
50 to 57	54	38.30					
58 and above	26	35.38					
Passive Aggression				5	1.177	.321	
18 to 25	13	35.85					
26 to 33	27	37.41					
34 to 41	50	30.24					
42 to 49	50	30.52					
50 to 57	52	31.90					
58 and above	28	31.68					
Direct Aggression				5	1.342	.248	
18 to 25	12	39.08					
26 to 33	24	41.63					
34 to 41	46	32.43					
42 to 49	50	34.80					
50 to 57	53	34.74					
58 and above	26	32.73					
Indirect Aggression				5	1.101	.361	
18 to 25	14	24.93					
26 to 33	29	28.55					
34 to 41	50	23.42					
42 to 49	52	22.65					
50 to 57	56	24.27					
58 and above	28	24.04					

Table 4-19 Continued

Variable and Age Group	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
Intention to Leave				5	3.266	.007	
18 to 25	12	16.58					
26 to 33	31	11.77					
34 to 41	50	12.54					
42 to 49	53	12.53					
50 to 57	57	11.14					
58 and above	29	13.66					
18 to 25 > 26 to 33			4.81				.034
18 to 25 > 34 to 41			4.04				.083
18 to 25 > 42 to 49			4.06				.079
18 to 25 > 50 to 57			5.44				.004
18 to 25 > 58 and above			2.93				.457

For categorical variables, Chi-square tests were used to compare differences in *Job Category (Non-Management or Management according to Age)*. There was a significant association between *Age* and *Job Category* $\chi^2 (5) = 15.96, p = .007$. The frequency of both *Non-Management* employees (16.2%) and *Management* employees (8.7%) were significantly higher in the *50 to 57 Age Group*. The results of Chi-square analysis of differences in *Job Category* according to *Age* are presented in Table 4-20.

Table 4-20

Chi-square Analysis of Differences in Job Category According to Age: (N =241)

Variables	N	Non-Management	Management	Chi-square Value	df	p-value
Age				15.961	5	.007
18 to 25	14	5.4%	.4%			
26 to 33	31	11.2%	1.7%			
34 to 41	52	13.7%	7.9%			
42 to 49	54	14.9%	7.5%			
50 to 57	60	16.2%	8.7%			
58 and above	30	5.8%	6.6%			

Chi-square tests were also used to compare differences in *Telecommunications Sector* according to *Age*. There was not a significant association between *Age* and

Telecom Sector $\chi^2 (15) = 20.29, p = .161$. The results of Chi-square analysis of differences in *Telecommunications Sector* according to *Age* are presented in Table 4-21.

Table 4-21

Chi-square Analysis of Differences in Telecommunications Sector According to Age:
(*N* = 241)

Variables	N	Wireline	Wireless	Cable	Satellite	Chi-square Value	df	p-value
Age						20.294	15	.161
18 to 25	14	2.1%	1.2%	1.2%	1.2%			
26 to 33	31	4.6%	4.1%	2.9%	1.2%			
34 to 41	52	8.7%	7.5%	3.7%	1.7%			
42 to 49	54	11.2%	5.8%	3.3%	2.1%			
50 to 57	60	15.8%	4.6%	4.6%	0.0%			
58 and above	30	7.1%	2.1%	1.7%	1.7%			

Differences in Work Profiles According to Gender

For comparison of work profiles according to *Gender*, multiple Independent *t*-tests were performed. Chi-square tests were performed for nominal categorical variables such as *job category* and *telecommunications sector*. There was a significant difference in *Supervisory Level* ($t = 2.886, p = .004$), between *Males* and *Females*. *Females* reported a significantly higher *Number of Employees at Work Location* than *Males* ($t = -3.886, p = .000$). *Males* reported significantly higher perceptions of *Organizational Justice* (total scale) than did *Female* employees ($t = 2.117, p = .035$). *Males* also had significantly higher perceptions of *Procedural Justice* than *Female* employees ($t = 3.130, p = .002$). Although not significant, a trend relationship resulted between *Males* and *Females* in perceptions of *Distributive Justice* ($t = 1.836, p = .068$) with *Males* reporting higher results.

There was not a significant difference between *Males* and *Females* in observed *Physical Workplace Aggression* ($t = 1.912, p = .057$), however, a trend relationship resulted. *Males* reported a higher association with *Physical Workplace Aggression* than

Females. *Males* also accounted for higher observed *Direct Workplace Aggression Behaviors* ($t = 1.674, p = .096$) than *Females*, however, the differences were not significant, resulting in a trend relationship. Results of Independent *t*-tests of employee work profiles, *Organizational Justice*, *Workplace Aggression* and *Intention to Leave* according to *Gender* are presented in Table 4-22.

Table 4-22

Comparison of Employee Work Profiles, Organizational Justice, Workplace Aggression Behaviors, and Intention to Leave According to Gender: Independent t-test

Variable and Gender	N	Mean	Mean Difference	t-value	p-value
Seniority			1.77	.759	.448
Males	149	3.73			
Females	92	3.55			
Number of Employees Supervised			.168	1.583	.115
Males	149	1.48			
Females	92	1.32			
Supervisory Level			.449	2.886	.004
Males	149	1.96			
Females	92	1.51			
Number of Employees at Work			-.480	-3.886	.000
Location					
Males	149	2.88			
Females	92	3.36			
Organizational Justice (Total Scale)			4.517	2.117	.035
Males	131	70.11			
Females	82	65.60			
Procedural Justice			2.540	3.130	.002
Males	140	22.51			
Females	90	19.97			
Distributive Justice			.982	1.836	.068
Males	145	14.19			
Females	90	13.21			
Interpersonal Justice			-.393	-.722	.471
Males	147	15.22			
Females	90	15.61			
Informational Justice			.374	.611	.542
Males	142	17.50			
Females	87	17.13			

Table 4-22 Continued

Variable and Gender	N	Mean	Mean Difference	t-value	p-value
WAR-Q (Total Score)			6.614	.983	.327
Males	119	103.17			
Females	74	96.55			
Verbal Aggression			2.926	.743	.458
Males	132	56.40			
Females	82	53.48			
Physical Aggression			1.833	1.912	.057
Males	142	17.02			
Females	85	15.19			
Active Aggression			4.132	1.650	.101
Males	135	39.76			
Females	77	35.62			
Passive Aggression			1.611	.795	.428
Males	136	32.71			
Females	84	31.10			
Direct Aggression			3.815	1.674	.096
Males	135	36.41			
Females	76	32.59			
Indirect Aggression			2.457	1.591	.113
Males	142	25.20			
Females	87	22.75			
Intention to Leave			-.447	-.683	.495
Males	146	12.27			
Females	86	12.72			

For categorical variables, Chi-square tests were used to compare differences in *Job Category* (management and non-management) according to *Gender*. There was a significant association between *Gender* and *Job Category* $\chi^2 (1) = 4.09, p = .043$. The frequency of both *Non-Management* (38.6%) and *Management Male* employees (23.2%) was higher than *Female Non-Management* (28.6%) and *Female Management* (9.5%) employees. The results of Chi-square tests of differences in *Job Category* according to *Gender* are presented in Table 4-23.

Table 4-23

Chi-square Analysis of Differences in Job Category According to Gender: (N=241)

Variable	N	Non- Management	Management	Chi-square value	df	p-value
Gender				4.088	1	.043
Males	149	38.6%	23.2%			
Females	92	28.6%	9.5%			

Chi-square tests were also used to compare differences in *Telecommunications Sector* according to *Gender*. There was not a significant association between *Gender* and *Telecommunications Sector* $\chi^2 (3) = 2.04, p = .565$. The results of Chi-square analysis of differences in *Telecommunications Sector* according to *Gender* are shown in Table 4-24.

Table 4-24

Chi-square Test of Differences in Telecommunications Sector According to Gender: (N=241)

Variables	N	Wireline	Wireless	Cable	Satellite	Chi- square Value	df	p- value
Gender						2.037	3	.565
Males	149	31.1%	16.6%	9.1%	5.0%			
Female	92	18.3%	8.7%	8.3%	2.9%			

Differences in Work Profiles According to Race

For comparison of work profiles according to *Race*, multiple ANOVA tests were performed. The variable was recoded into five *Race* categories so that the different *Races* could be compared. For nominal categorical variables such as *job category* and *telecommunications sector*, Chi-square tests were performed. There was a significant effect of *Race* on the *Number of Employees Supervised* ($p = .000$). The *American Indian or Alaska Native Race* ($M = 4.00$) reported supervising more employees than the *Asian* group ($M = 2.29$), the *Black or African American* group ($M = 2.08$), the *White* group (M

= 1.34), and the *Other Race* group (M = 1.25). Post hoc tests were not performed because at least one group had fewer than two cases.

There was a significant effect of *Race* on *Supervisory Level* ($p = .004$). *Supervisory Level* was significantly higher for employees in the *American Indian or Alaska Native* group (M = 5.00) than they were for the *Asian* group (M = 2.86), the *Black or African American* group (M = 2.08), the *White* group (M = 1.73), and the *Other Race* group (M = 1.25). Results of ANOVA of comparison of employee work profiles, *Organizational Justice*, *Workplace Aggression*, and *Intention to Leave* according to *Race* are presented in Table 4-25.

Table 4-25

Comparison of Employee Work Profiles, Organizational Justice, Workplace Aggression Behaviors, and Intention to Leave According to Race: ANOVA and Post Hoc Comparisons

Variable and Race	N	Mean	df	F	p	Tukey Post Hoc Comparison
Seniority			4	.840	.501	
White	216	3.65				
Black or African American	13	3.15				
American Indian or Alaska Native	1	4.00				
Asian	7	4.43				
Other	4	4.50				
Number of Employees Supervised			4	8.224	.000	
White	216	1.34				
Black or African American	13	2.08				
American Indian or Alaska Native	1	4.00				
Asian	7	2.29				
Other	4	1.25				
Supervisory Level			4	3.931	.004	
White	216	1.73				
Black or African American	13	2.08				
American Indian or Alaska Native	1	5.00				
Asian	7	2.86				
Other	4	1.25				

Table 4-25 Continued

Variable and Race	N	Mean	df	F	p	Tukey Post Hoc Comparison
Number of Employees at Work Location			4	.065	.992	
White	216	3.06				
Black or African American	13	3.00				
American Indian or Alaska Native	1	3.00				
Asian	7	3.14				
Other	4	3.25				
Organizational Justice (Total Scale)			4	.433	.785	
White	189	68.25				
Black or African American	13	67.38				
American Indian or Alaska Native	1	85.00				
Asian	6	68.17				
Other	4	73.75				
Procedural Justice			4	.503	.734	
White	205	21.44				
Black or African American	13	21.54				
American Indian or Alaska Native	1	30.00				
Asian	7	22.14				
Other	4	21.75				
Distributive Justice			4	.187	.945	
White	211	13.81				
Black or African American	13	13.46				
American Indian or Alaska Native	1	16.00				
Asian	6	13.67				
Other	4	15.00				
Interpersonal Justice			4	.602	.662	
White	212	15.37				
Black or African American	13	14.92				
American Indian or Alaska Native	1	19.00				
Asian	7	14.43				
Other	4	17.50				
Informational Justice			4	.330	.858	
White	204	17.31				
Black or African American	13	17.46				
American Indian or Alaska Native	1	20.00				
Asian	7	17.00				
Other	4	19.50				

Table 4-25 Continued

Variable and Race	N	Mean	df	F	p	Tukey Post Hoc Comparison
WAR-Q (Total Score)			4	.550	.700	
White	171	99.99				
Black or African American	11	116.18				
American Indian or Alaska Native	1	98.00				
Asian	7	102.71				
Other	3	76.00				
Verbal Aggression			4	.323	.862	
White	191	55.25				
Black or African American	12	59.08				
American Indian or Alaska Native	1	54.00				
Asian	7	57.00				
Other	3	38.67				
Physical Aggression			4	1.170	.325	
White	202	16.09				
Black or African American	13	20.38				
American Indian or Alaska Native	1	17.00				
Asian	7	16.43				
Other	4	15.25				
Active Aggression			4	1.247	.292	
White	189	37.69				
Black or African American	11	49.55				
American Indian or Alaska Native	1	36.00				
Asian	7	38.43				
Other	4	34.00				
Passive Aggression			4	.286	.887	
White	197	32.04				
Black or African American	12	32.83				
American Indian or Alaska Native	1	30.00				
Asian	7	35.57				
Other	3	25.00				
Direct Aggression			4	1.393	.238	
White	188	34.53				
Black or African American	11	45.64				
American Indian or Alaska Native	1	34.00				
Asian	7	35.29				
Other	4	29.50				
Indirect Aggression			4	.134	.970	
White	204	24.20				
Black or African American	13	24.46				
American Indian or Alaska Native	1	25.00				
Asian	7	27.00				
Other	4	22.25				
Intention to Leave			4	.773	.544	
White	208	12.45				
Black or African American	12	12.25				
American Indian or Alaska Native	1	5.00				
Asian	7	13.86				
Other	4	11.75				

Chi-square tests were used to compare differences in *Job Category (Non-Management or Management)* according to *Race*. There was not a significant association between *Race* and *Job Category* $\chi^2 (4) = 8.446, p = .077$. However, a trend relationship resulted in *Whites* being overwhelmingly higher than any other *Race* among *Non-Management* (62.2%) and *Management* (27.7%) employees. The results of Chi-square analysis of differences in *Job Category* according to *Race* are presented in Table 4-26.

Table 4-26

Chi-square Analysis of Differences in Job Category According to Race: (N =241)

Variables	N	Non- Management	Management	Chi-square Value	df	p-value
Race				8.446	4	.077
White	216	62.2%	27.4%			
Black or African American	13	2.9%	2.5%			
American Indian or Alaska Native	1	0%	.4%			
Asian	7	.8%	2.1%			
Other	4	1.2%	.4%			

Chi-square tests were also used to compare differences in *Telecommunications Sector* according to *Race*. There was not a significant association between *Race* and *Telecom Sector* $\chi^2 (12) = 16.793, p = .158$. The results of Chi-square analysis of differences in *Telecommunications Sector* according to *Race* are presented in Table 4-27.

Table 4-27

Chi-square Analysis of Differences in Telecommunications Sector According to Race: (N =241)

Variables	N	Wireline	Wireless	Cable	Satellite	Chi- square Value	df	p- value
Race						16.793	12	.158
White	216	46.1%	21.2%	15.4%	7.1%			
Black or African American	13	2.1%	1.7%	.8%	.8%			
American Indian or Alaska Native	1	.0%	.4%	.0%	.0%			
Asian	7	.4%	2.1%	.4%	.0%			
Other	4	.8%	.0%	.8%	.0%			

Differences in Work Profiles According to Ethnicity

For comparison of work profiles according to *Ethnicity*, multiple Chi-square and Independent *t*-tests were performed. The variable was recoded into two categories so that the different *Hispanic or Latino* or *Not Hispanic or Latino* groups could be compared. There was a significant difference in *Organizational Justice* ($t = 2.299, p = .022$) between *Hispanic or Latino* or *Not Hispanic or Latino* employees. *Hispanic or Latino* employees had significantly higher mean scores ($M = 77.36$) for perceptions of *Organizational Justice* than *Not Hispanic or Latino* workers ($M = 67.74$). There was a significant difference in *Distributive Justice* ($t = 2.816, p = .005$) between *Hispanic or Latino* or *Not Hispanic or Latino* employees. *Hispanic or Latino* employees had significantly higher mean scores ($M = 16.50$) than *Not Hispanic or Latino* workers ($M = 13.62$). There was not a significant difference in *Informational Justice* ($t = 1.712, p = .088$) between *Hispanic or Latino* or *Not Hispanic or Latino* employees however, a trend relationship resulted. *Hispanic or Latino* employees reported higher mean scores than *Not Hispanic or Latino* workers. Independent *t*-tests of differences in *Employee Work Profiles*, *Organizational Justice*, *Workplace Aggression Behaviors*, and *Intention to Leave* according to *Ethnicity* are presented in Table 4-28.

Table 4-28

Comparison of Employee Work Profiles, Organizational Justice, Workplace Aggression Behaviors, and Intention to Leave According to Ethnicity: Independent t-test

Variable	N	Mean	Mean Difference	t-value	p-value
Seniority			-.243	-.532	.595
Hispanic or Latino	16	3.44			
Not Hispanic or Latino	225	3.68			
Number of Employees Supervised			-.114	-.549	.584
Hispanic or Latino	16	1.31			
Not Hispanic or Latino	225	1.43			

Table 4-28 Continued

Variable	N	Mean	Mean Difference	t-value	p-value
Supervisory Level			.026	.084	.933
Hispanic or Latino	16	1.81			
Not Hispanic or Latino	225	1.79			
Number of Employees at Work			.201	.811	.418
Location					
Hispanic or Latino	16	3.25			
Not Hispanic or Latino	225	3.05			
Organizational Justice (Total Scale)			9.613	2.299	.022
Hispanic or Latino	14	77.36			
Not Hispanic or Latino	199	67.74			
Procedural Justice			2.136	1.349	.179
Hispanic or Latino	16	23.50			
Not Hispanic or Latino	214	21.36			
Distributive Justice			2.869	2.816	.005
Hispanic or Latino	16	16.50			
Not Hispanic or Latino	219	13.62			
Interpersonal Justice			1.316	1.213	.226
Hispanic or Latino	15	16.60			
Not Hispanic or Latino	222	15.28			
Informational Justice			2.042	1.712	.088
Hispanic or Latino	15	19.27			
Not Hispanic or Latino	214	17.22			
WAR-Q (Total Score)			-5.623	-.380	.704
Hispanic or Latino	10	95.30			
Not Hispanic or Latino	183	100.92			
Passive Aggression			-.096	-.022	.982
Hispanic or Latino	12	32.00			
Not Hispanic or Latino	208	32.10			
Verbal Aggression			-4.885	-.609	.543
Hispanic or Latino	13	50.69			
Not Hispanic or Latino	201	55.58			
Indirect Aggression			-.963	-.326	.745
Hispanic or Latino	16	23.38			
Not Hispanic or Latino	213	24.34			
Active Aggression			-1.955	-.401	.689
Hispanic or Latino	14	36.43			
Not Hispanic or Latino	198	38.38			
Physical Aggression			.176	.091	.928
Hispanic or Latino	14	16.50			
Not Hispanic or Latino	213	16.32			
Direct Aggression			-1.757	-.384	.702
Hispanic or Latino	13	33.38			
Not Hispanic or Latino	198	35.14			
Intention to Leave			.528	.410	.682
Hispanic or Latino	15	12.93			
Not Hispanic or Latino	217	12.41			

Chi-square tests were used to compare differences in *Job Category* (*Management* or *Non-Management*) according to *Ethnicity* (*Hispanic or Latino* or *Not Hispanic or Latino*). There was not a significant association between *Ethnicity* and *Job Category* $\chi^2(1) = .018, p = .893$. The results of Chi-square analysis of differences in *Job Category* according to *Ethnicity* are presented in Table 4-29.

Table 4-29

Chi-square Analysis of Differences in Job Category According to Ethnicity: (N =241)

Variables	N	Hispanic or Latino	Not Hispanic or Latino	Chi-square Value	df	p-value
Job Category				.018	1	.893
Non-Management	162	4.6%	62.7%			
Management	79	2.1%	30.7%			

Chi-square tests were also used to compare differences in *Telecommunications Sector* according to *Ethnicity* (*Hispanic or Latino* or *Not Hispanic or Latino*). There was not a significant association between *Ethnicity* and *Telecommunications Sector* $\chi^2(3) = 1.413, p = .703$. The results of Chi-square analysis of differences in *Telecommunications Sector* according to *Ethnicity* are presented in Table 4-30.

Table 4-30

Chi-square Analysis of Differences in Telecommunications Sector According to Ethnicity: (N =241)

Variables	N	Hispanic or Latino	Not Hispanic or Latino	Chi-square Value	df	p-value
Telecommunications Sector				1.413	3	.703
Wireline Telecommunications	119	2.9%	46.5%			
Wireless Telecommunications	61	2.5%	22.8%			
Cable and Other Program	42	.8%	16.6%			
Distributors						
Satellite and Telecom Resellers	19	.4%	7.5%			

Differences in Work Profiles According to Highest Level of Education

For comparison of work profiles according to *Highest Level of Education*, multiple ANOVA tests were performed. There was a significant effect of *Highest Level of Education* on *Supervisory Level* ($p = .023$). *Supervisory Level* was significantly higher for employees in the *Graduate School* group ($M = 2.38$), than the *High School* ($p = .023$), and *College* ($p = .028$) groups. Results of ANOVA of comparison of employee work profiles, *Organizational Justice*, *Workplace Aggression*, and *Intention to Leave* according to *Highest Level of Education* are presented in Table 4-31.

Table 4-31

Comparison of Employee Work Profiles, Organizational Justice, Workplace Aggression Behaviors, and Intention to Leave According to Highest Level of Education: ANOVA and Post Hoc Comparisons

Variable and Highest Level of Education	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
Seniority				2	.382	.683	
High School	65	3.74					
College	150	3.59					
Graduate School	26	3.88					
Number of Employees Supervised				2	1.255	.287	
High School	65	1.40					
College	150	1.39					
Graduate School	26	1.65					
Supervisory Level				2	3.842	.023	
High School	65	1.66					
College	150	1.74					
Graduate School	26	2.38					
Graduate School >High School			.723				.023
Graduate School >College			.645				.028
Number of Employees at Work Location				2	1.567	.211	
High School	65	2.95					
College	150	3.06					
Graduate School	26	3.35					
Organizational Justice (Total Scale)				2	.767	.466	
High School	60	66.50					
College	130	69.38					
Graduate School	23	67.57					

Table 4-31 Continued

Variable and Highest Level of Education	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
Procedural Justice				2	1.946	.145	
High School	63	20.22					
College	141	22.01					
Graduate School	26	21.96					
Distributive Justice				2	.649	.523	
High School	63	13.70					
College	147	14.00					
Graduate School	25	13.04					
Interpersonal Justice				2	.456	.634	
High School	65	15.06					
College	147	15.56					
Graduate School	25	15.00					
Informational Justice				2	.615	.542	
High School	62	16.84					
College	143	17.59					
Graduate School	24	17.29					
WAR-Q (Total Score)				2	.249	.780	
High School	50	104.44					
College	120	99.02					
Graduate School	23	100.78					
Verbal Aggression				2	.117	.890	
High School	55	56.65					
College	136	54.59					
Graduate School	23	56.09					
Physical Aggression				2	.316	.729	
High School	62	16.94					
College	140	16.14					
Graduate School	25	15.96					
Active Aggression				2	.913	.403	
High School	53	40.98					
College	134	37.57					
Graduate School	25	36.16					
Passive Aggression				2	.156	.856	
High School	59	32.37					
College	135	31.72					
Graduate School	26	33.38					
Direct Aggression				2	1.102	.334	
High School	53	37.79					
College	133	34.27					
Graduate School	25	33.24					
Indirect Aggression				2	.085	.919	
High School	60	23.93					
College	143	24.27					
Graduate School	26	25.04					
Intention to Leave				2	.054	.947	
High School	63	12.35					
College	143	12.52					
Graduate School	26	12.23					

Chi-square tests were used to compare differences in *Job Category (Non-Management or Management)* according to *Highest Level of Education*. There was a significant association between *Highest Level of Education* and *Job Category* $\chi^2 (2) = 9.331, p = .009$. The frequency of both *Non-Management* employees (42.3%) and *Management* employees (19.9%) were significantly higher in the *College* group. The results of Chi-square analysis of differences in *Job Category* according to *Highest Level of Education* are presented in Table 4-32.

Table 4-32

Chi-square Analysis of Differences in Job Category According to Highest Level of Education: (N =241)

Variables	N	Non-Management	Management	Chi-square Value	df	p-value
Highest Level of Education				9.331	2	.009
High School	65	20.3%	6.6%			
College	150	42.3%	19.9%			
Graduate School	26	4.6%	6.2%			

Chi-square tests were also used to compare differences in *Telecommunications Sector* according to *Highest Level of Education*. There was not a significant association between *Highest Level of Education* and *Telecom Sector* $\chi^2 (6) = 6.328, p = .387$. The results of Chi-square analysis of differences in *Telecommunications Sector* according to *Highest Level of Education* are presented in Table 4-33.

Table 4-33

Chi-square Analysis of Differences in Telecommunications Sector According to Highest Level of Education: (N =241)

Variables	N	Wireline	Wireless	Cable	Satellite	Chi-square Value	df	p-value
Highest Level of Education						6.328	6	.387
High School	65	14.1%	4.1%	5.8%	2.9%			
College	150	29.5%	17.8%	10.4%	4.6%			
Graduate School	26	5.8%	3.3%	1.2%	.4%			

Research Question 3

Are there differences in demographic characteristics, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice and informational justice), workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave according to employee work profiles?

Differences in employee demographic characteristics, perceptions of organizational justice, workplace aggression behaviors, and intention to leave were analyzed according to employee work profiles (seniority, job category, number of employees supervised, supervisory level, number of employees at work location, and telecommunications sector). The 20-item *Organizational Justice* scale, the 60-item *Workplace Aggression Research Questionnaire (WAR-Q)*, and the 5-item *Turnover Intention* scale were used. To examine differences in employee demographic variables of age and highest level of education, ANOVA were used. Differences in categorical demographic variables (gender, ethnicity, and race) were analyzed using Chi-square. Differences in organizational justice, workplace aggression and intention to leave were analyzed using Independent *t*-tests (telecommunications sector and job category) or ANOVA (seniority, number of employees supervised, supervisory level, and number of employees at work location).

Tukey's tests were used as post hoc comparisons when significant *F* values resulted from ANOVA analyses. This provided a comparison control for Type I errors by correcting the level of significance for each test (Field, 2005). According to Field (2005) a Type I error, also known as a false positive, "occurs when we believe that there is a genuine effect in our population" (p. 748), when in reality none exists. Tukey's test compares the largest mean with the smallest mean, and then continues to compare the largest mean to the next smallest mean until no significant difference is found.

Differences in Employee Demographics According to Seniority

For comparison of employee demographics according to *Seniority*, multiple ANOVA and Chi-square tests were performed. The variable was recoded into seven seniority categories so that the different seniority groups could be compared. There was a significant effect of *Seniority* on *Age Groups* ($p = .000$). *Age* was significantly higher for employees with *Seniority* of *Over 31 years*, than for almost all the groups ($p < .05$). There was also a significant effect of *Seniority* on *Intention to Leave* ($p = .041$). *Intention to Leave* was significantly higher for employees in the *Less than one year* category ($M = 15.93$). Results of ANOVA of comparison of *Employee Demographics*, *Organizational Justice*, *Workplace Aggression*, and *Intention to Leave* according to *Seniority* are presented in Table 4-34.

Table 4-34

Comparison of Employee Demographic Characteristics, Organizational Justice, Workplace Aggression Behaviors, and Intention to Leave According to Seniority Groups: ANOVA and Post Hoc Comparisons

Variable and Seniority Group	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
Age				6	13.850	.000	
Less than one year	14	3.00					
2 to 5 years	63	3.19					
6 to 10 years	56	3.63					
11 to 15 years	39	3.77					
16 to 22 years	17	4.18					
23 to 30 years	30	4.83					
Over 31 years	22	5.41					
Over 31 years > Less than one year			2.41				.000
Over 31 years > 2 to 5 years			2.22				.000
Over 31 years > 6 to 10 years			1.78				.000
Over 31 years > 11 to 15 years			1.64				.001
Over 31 years > 16 to 22 years			1.23				.034
Over 31 years > 23 to 30 years			.58				.635

Table 4-34 Continued

Variable and Seniority Group	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
Highest Level of Education				6	1.636	.138	
Less than one year	14	2.64					
2 to 5 years	63	2.79					
6 to 10 years	56	2.88					
11 to 15 years	39	2.95					
16 to 22 years	17	3.06					
23 to 30 years	30	2.87					
Over 31 years	22	2.59					
Organizational Justice (Total Scale)				6	.591	.737	
Less than one year	13	62.00					
2 to 5 years	55	67.22					
6 to 10 years	49	69.71					
11 to 15 years	33	68.85					
16 to 22 years	16	70.31					
23 to 30 years	28	68.21					
Over 31 years	19	70.42					
Procedural Justice				6	.820	.555	
Less than one year	14	19.07					
2 to 5 years	61	20.64					
6 to 10 years	51	22.04					
11 to 15 years	37	22.14					
16 to 22 years	17	21.59					
23 to 30 years	29	22.17					
Over 31 years	21	22.33					
Distributive Justice				6	.334	.919	
Less than one year	14	12.86					
2 to 5 years	62	13.45					
6 to 10 years	55	14.13					
11 to 15 years	38	14.05					
16 to 22 years	16	13.69					
23 to 30 years	29	14.17					
Over 31 years	21	13.90					
Interpersonal Justice				6	.321	.926	
Less than one year	14	14.36					
2 to 5 years	62	15.42					
6 to 10 years	54	15.17					
11 to 15 years	38	15.55					
16 to 22 years	17	16.18					
23 to 30 years	30	15.17					
Over 31 years	22	15.68					
Informational Justice				6	.810	.563	
Less than one year	13	15.31					
2 to 5 years	59	17.83					
6 to 10 years	54	17.54					
11 to 15 years	36	17.25					
16 to 22 years	17	18.35					
23 to 30 years	30	16.90					
Over 31 years	20	16.85					

Table 4-34 Continued

Variable and Seniority Group	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
WAR-Q (Total Score)				6	.536	.781	
Less than one year	12	106.92					
2 to 5 years	49	97.80					
6 to 10 years	43	107.07					
11 to 15 years	32	99.38					
16 to 22 years	15	94.93					
23 to 30 years	22	107.09					
Over 31 years	20	89.15					
Verbal Aggression				6	.512	.799	
Less than one year	13	57.15					
2 to 5 years	57	52.47					
6 to 10 years	47	60.15					
11 to 15 years	35	56.23					
16 to 22 years	17	54.53					
23 to 30 years	24	55.88					
Over 31 years	21	49.19					
Physical Aggression				6	.549	.770	
Less than one year	14	17.07					
2 to 5 years	57	16.07					
6 to 10 years	55	17.02					
11 to 15 years	36	15.64					
16 to 22 years	15	15.73					
23 to 30 years	28	17.64					
Over 31 years	22	14.73					
Active Aggression				6	.584	.743	
Less than one year	13	41.38					
2 to 5 years	52	38.25					
6 to 10 years	50	39.24					
11 to 15 years	33	37.70					
16 to 22 years	17	35.65					
23 to 30 years	26	41.35					
Over 31 years	21	33.14					
Passive Aggression				6	.735	.622	
Less than one year	13	30.15					
2 to 5 years	59	30.75					
6 to 10 years	49	35.76					
11 to 15 years	38	31.42					
16 to 22 years	15	31.93					
23 to 30 years	25	32.16					
Over 31 years	21	29.76					
Direct Aggression				6	.572	.753	
Less than one year	13	38.15					
2 to 5 years	52	35.25					
6 to 10 years	50	35.66					
11 to 15 years	34	34.47					
16 to 22 years	15	31.87					
23 to 30 years	26	37.81					
Over 31 years	21	30.81					

Table 4-34 Continued

Variable and Seniority Group	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
Indirect Aggression				6	.795	.575	
Less than one year	14	22.14					
2 to 5 years	61	22.82					
6 to 10 years	52	26.56					
11 to 15 years	38	24.53					
16 to 22 years	17	26.06					
23 to 30 years	26	24.46					
Over 31 years	21	22.10					
Intention to Leave				6	2.231	.041	
Less than one year	14	15.93					
2 to 5 years	60	13.23					
6 to 10 years	52	11.85					
11 to 15 years	39	11.28					
16 to 22 years	17	12.94					
23 to 30 years	28	11.86					
Over 31 years	22	11.86					
Less than one year > 2 to 5 years			2.695				.470
Less than one year > 6 to 10 years			4.082				.068
Less than one year > 11 to 15 years			4.647				.030
Less than one year > 16 to 22 years			2.987				.584
Less than one year > 23 to 30 years			4.071				.122
Less than one year > Over 31 years			4.065				.160

Chi-square tests were used to compare differences in *Gender* according to *Seniority*. There was not a significant association between *Seniority* and *Gender* $\chi^2(6) = 4.785, p = .572$. The results of Chi-square analysis of differences in *Gender* according to *Seniority* are presented in Table 4-35.

Table 4-35

Chi-square Analysis of Differences in Gender According to Seniority: (N=241)

Variables	N	Male	Female	Chi-square Value	df	p-value
Seniority				4.785	6	.572
Less than one year	14	3.3%	2.5%			
2 to 5 years	63	16.6%	9.5%			
6 to 10 years	56	12.9%	10.4%			
11 to 15 years	39	9.5%	6.6%			
16 to 22 years	17	5.8%	1.2%			
23 to 30 years	30	7.5%	5.0%			
Over 31 years	22	6.2%	2.9%			

Chi-square tests were also used to compare differences in *Race* according to *Seniority*. There was not a significant effect of *Seniority* on *Race* $\chi^2 (24) = 28.902, p = .224$. Results of Chi-square analysis of differences in *Race* according to *Seniority* are shown in Table 4-36.

Table 4-36

Chi-square Analysis of Differences in Race According to Seniority: (N=241)

Variables	N	White	Black or African American	American Indian or Alaska Native	Asian	Chi-square Value	df	p-value
Seniority						28.902	24	.224
Less than one year	14	5.8%	.0%	.0%	.0%			
2 to 5 years	63	21.6%	3.3%	.0%	.8%			
6 to 10 years	56	22.8%	.4%	.0%	.0%			
11 to 15 years	39	14.5%	.4%	.4%	.4%			
16 to 22 years	17	5.8%	.4%	.0%	.8%			
23 to 30 years	30	10.8%	.4%	.0%	.4%			
Over 31 years	22	8.3%	.4%	.0%	.4%			

To compare differences in *Ethnicity* (*Hispanic or Latino or Not Hispanic or Latino*) according to *Seniority* Chi-square tests were used. There was not a significant effect of *Seniority* on *Ethnicity* $\chi^2 (6) = 3.593, p = .732$. Results of Chi-square analysis of differences in *Ethnicity* according to *Seniority* are presented in Table 4-37.

Table 4-37

Chi-square Analysis of Differences in Ethnicity According to Seniority: (N=241)

Variables	N	Hispanic or Latino	Not Hispanic or Latino	Chi- square Value	df	p-value
Seniority				3.593	6	.732
Less than one year	14	.0%	5.8%			
2 to 5 years	63	2.1%	24.1%			
6 to 10 years	56	1.7%	21.6%			
11 to 15 years	39	1.7%	14.5%			
16 to 22 years	17	.4%	6.6%			
23 to 30 years	30	.8%	11.6%			
Over 31 years	22	.0%	9.1%			

Differences in Employee Demographics According Job Category

For comparison of employee demographics according to *Job Category*, multiple Chi-square and independent *t*-tests were performed. The nominal categorical variable was recoded into two job categories, *Non-management* and *Management* so that the different job categories could be compared. There was a significant difference in *Age* ($t = -3.466, p = .001$) between *Non-management* and *Management* employees. On a 6-point interval scale, *Age* ranged from 1) *18 to 25 years* to 6) *58 and above*. Mean scores for *Management* were 4.29 which represented *Age* of *Management* employees between 4) *42 to 49 years*, and 5) *50 to 57 years* or *49 to 57 years old*. *Non-Management* employees mean scores were 3.64 which represented *Age* to be within 3) *34 to 41 years*, and 4) *42 to 49 years* or *41 to 49 years old*. There was also a significant difference in *Highest Level of Education* ($t = -2.760, p = .006$) between *Non-Management* or *Management* employees. *Management* employees reported significantly higher educational levels ($p = .006$) than *Non-Management* workers.

Management employees reported significantly higher mean scores ($M = 72.47$) than *Non-Management* employees ($M = 66.46$) in perceptions of *Organizational Justice*

(total scale). *Management* employees also reported significantly higher mean scores ($M = 23.50$) than *Non-Management* employees ($M = 20.53$), in perceptions of *Procedural Justice*. There was not a significant difference in *Distributive Justice* ($t = -1.816, p = .071$) between *Non-Management* or *Management* employees, however, a trend relationship resulted from the analysis. Mean results for *Management* employees ($M = 14.49$) indicated greater perceptions of *Distributive Justice* than *Non-Management* workers.

In addition, a strong trend relationship resulted with *Management* employees reporting higher mean scores for *Indirect Aggression* than *Non-Management* employees, although findings were not significant ($p = .058$). Independent *t*-tests of differences in *Employee Demographics, Organizational Justice, Workplace Aggression Behaviors, and Intention to Leave* according to *Job Category* are presented in Table 4-38.

Table 4-38

Comparison of Employee Demographic Characteristics, Organizational Justice, Workplace Aggression Behaviors, and Intention to Leave According to Job Category (Non-Management and Management Employees): Independent t-test

Variables	N	Mean	Mean Difference	t-value	p-value
Age			-.655	-3.466	.001
Non-Management	162	3.64			
Management	79	4.29			
Highest Level of Education			-.222	-2.760	.006
Non-Management	162	2.77			
Management	79	2.99			
Organizational Justice (Total Scale)			-6.015	-2.720	.007
Non-Management	145	66.46			
Management	68	72.47			
Procedural Justice			-2.968	-3.545	.000
Non-Management	154	20.53			
Management	76	23.50			
Distributive Justice			-1.006	-1.816	.071
Non-Management	158	13.49			
Management	77	14.49			

Table 4-38 Continued

Variable	N	Mean	Mean Difference	t-value	p-value
Interpersonal Justice			-.867	-1.545	.124
Non-Management	159	15.08			
Management	78	15.95			
Informational Justice			-.150	-.236	.814
Non-Management	155	17.31			
Management	74	17.46			
WAR-Q (Total Score)			-7.851	-1.126	.262
Non-Management	130	98.07			
Management	63	105.92			
Passive Aggression			-3.198	-1.519	.130
Non-Management	150	31.07			
Management	70	34.27			
Verbal Aggression			-3.415	-.834	.405
Non-Management	145	54.18			
Management	69	57.59			
Indirect Aggression			-1.908	-3.061	.058
Non- Management	156	23.29			
Management	73	26.36			
Active Aggression			-1.608	-.626	.532
Non-Management	141	37.72			
Management	71	39.32			
Physical Aggression			-1.297	-1.313	.190
Non-Management	151	37.72			
Management	76	39.32			
Direct Aggression			-1.657	-.714	.476
Non-Management	139	34.47			
Management	72	36.13			
Intention to Leave			.923	1.366	.173
Non-Management	158	12.73			
Management	74	11.81			

For categorical variables, Chi-square tests were used to compare differences in *Gender*, *Race*, *Ethnicity*, and *Highest Level of Education* according to *Job Category* (*Non-Management* or *Management*). There were significantly ($p = .043$) more *Males* in both the *Non-management* (38.6%) and *Management* (23.2%) *Job Category* than *Females*. Only 9.5% of *Females* were *Management* workers. Although not significant ($p = .077$), a trend relationship resulted in *Whites* being overwhelmingly higher than any other *Race* according to *Non-Management* (62.2%) and *Management* (27.7%) employees. Chi-square tests also resulted in a significant association between *Job Category* and

Highest Level of Education $\chi^2 (2) = 9.331, p = .009$. The frequency of *Non-Management* employees found that 42.3% had a *College* education, and 6.2% of *Management* employees had a *Graduate School* education. Results of Chi-square analysis of differences in *Gender, Race, Ethnicity, and Highest Level of Education* according to *Job Category* are presented in Table 4-39.

Table 4-39

Comparison of Gender, Race, Ethnicity, Highest Level of Education, Organizational Justice, Workplace Aggression Behaviors, and Intention to Leave According to Job Category: Chi-square Analysis

Variables	N	Non- Management	Management	Chi- square Value	df	p-value
Gender				4.088	1	.043
Males	149	38.6%	23.2%			
Females	92	28.6%	9.5%			
Race				8.446	4	.077
White	216	62.2%	27.4%			
Black or African American	13	2.9%	2.5%			
American Indian Alaskan Native	1	.0%	.4%			
Asian	7	.8%	2.1%			
Other	4	1.2%	.4%			
Ethnicity				.018	1	.893
Hispanic or Latino	16	4.6%	2.1%			
Not Hispanic or Latino	225	62.7%	30.7%			
Highest Level of Education				9.331	2	.009
High School	65	20.3%	6.6%			
College	150	42.3%	19.9%			
Graduate School	26	4.6%	6.2%			

Differences According to Number of Employees Supervised

For comparison of employee demographics according to *Number of Employees Supervised*, multiple ANOVA tests were performed. For categorical variables, Chi-square tests were used. *Age* was significantly higher ($p = .026$) for employees in the *1 to 15 Employees Supervised* category ($M = 4.29$), than for almost all the groups.

Organizational Justice (total scale) was also significantly higher ($p = .000$) for employees in the *16 to 50 Number of Employees Supervised* group ($M = 78.19$).

Procedural Justice was significantly higher ($p = .000$) for employees in the *16 to 50 Number of Employees Supervised* group ($M = 25.94$), than for all the groups ($p = < .05$). Employees in the *Over 51 Number of Employees Supervised* group ($M = 18.10$) reported the lowest perceptions of *Procedural Justice*. There was not a significant effect of *Number of Employees Supervised* on *Distributive Justice* ($p = .068$), however, a trend relationship resulting with employees with the *16 to 50 Number of Employees Supervised* group reporting the highest mean scores ($M = 15.06$). *Interpersonal Justice* was significantly higher ($p = .042$) for employees in the *16 to 50 Number of Employees Supervised* group ($M = 17.00$), than for all the groups.

Physical Workplace Aggression was significantly higher ($p = .005$) for employees in the *16 to 50 Number of Employees Supervised* group ($M = 20.06$), than for all the other groups. *Active Workplace Aggression* was significantly higher ($p = .029$) for employees in the *Over 51 Number of Employees Supervised* group ($M = 49.38$). *Direct Workplace Aggression* was also significantly higher ($p = .023$) for employees in the *Over 51 Number of Employees Supervised* group ($M = 45.75$), than for all the groups ($p = < .05$). There was not a significant effect of *Number of Employees Supervised* according to *Indirect Workplace Aggression Behaviors* ($p = .092$), however, a trend relationship resulted with the *16 to 50 Employees* group reporting the highest mean scores ($M = 27.88$). Results of ANOVA of comparison of *Employee Demographics*, *Organizational Justice*, *Workplace Aggression*, and *Intention to Leave* according to *Number of Employees Supervised* are presented in Table 4-40

Table 4-40

Comparison of Employee Demographic Characteristics, Organizational Justice, Workplace Aggression Behaviors, and Intention to Leave According to Number of Employees Supervised: ANOVA and Post Hoc Comparisons

Variable and Number of Employees Supervised	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
Age				3	3.151	.026	
0	178	3.84					
1 to 15 Employees	35	4.29					
16 to 50 Employees	18	3.67					
Over 51 Employees	10	2.80					
1 to 15 Employees > 0			.443				.314
1 to 15 Employees > 16 to 50 Employees			.619				.418
1 to 15 Employees > Over 51 Employee			1.486				.017
Highest Level of Education				3	.996	.395	
0	178	2.80					
1 to 15 Employees	35	2.97					
16 to 50 Employees	18	2.94					
Over 51 Employees	10	2.80					
Organizational Justice (Total Scale)				3	6.616	.000	
0	160	66.89					
1 to 15 Employees	27	75.26					
16 to 50 Employees	16	78.19					
Over 51 Employees	10	57.80					
16 to 50 Employees > 0			11.29				.020
16 to 50 Employees > 1 to 15 Employees			2.93				.922
16 to 50 Employees > Over 51 Employee			20.39				.004
Procedural Justice				3	8.050	.000	
0	170	20.72					
1 to 15 Employees	32	24.31					
16 to 50 Employees	18	25.94					
Over 51 Employees	10	18.10					
16 to 50 Employees > 0			5.23				.002
16 to 50 Employees > 1 to 15 Employees			1.63				.780
16 to 50 Employees > Over 51 Employee			7.84				.004
Distributive Justice				3	2.404	.068	
0	174	13.67					
1 to 15 Employees	34	14.68					
16 to 50 Employees	17	15.06					
Over 51 Employees	10	11.40					

Table 4-40 Continued

Variable and Number of Employees Supervised	N	Mean	Mean Difference	df	F	p-value	Tukey Post Hoc Comparison
Interpersonal Justice				6	2.770	.042	
0	175	15.23					
1 to 15 Employees	34	15.97					
16 to 50 Employees	18	17.00					
Over 51 Employees	10	12.70					
16 to 50 Employees>0			1.77				.289
16 to 50 Employees>1 to 15 Employees			1.03				.817
16 to 50 Employees> Over 51 Employees			4.30				.036
Informational Justice				3	1.953	.122	
0	170	17.21					
1 to 15 Employees	32	17.56					
16 to 50 Employees	17	19.53					
Over 51 Employees	10	15.60					
WAR-Q (Total Score)				3	1.852	.139	
0	143	96.34					
1 to 15 Employees	26	109.50					
16 to 50 Employees	16	113.19					
Over 51 Employees	8	123.38					
Verbal Aggression				3	1.129	.338	
0	158	53.51					
1 to 15 Employees	30	58.47					
16 to 50 Employees	17	59.00					
Over 51 Employees	9	68.67					
Physical Aggression				3	4.465	.005	
0	168	15.38					
1 to 15 Employees	33	18.36					
16 to 50 Employees	17	20.06					
Over 51 Employees	9	19.78					
16 to 50 Employees>0			4.68				.040
16 to 50 Employees>1 to 15 Employees			1.70				.842
16 to 50 Employees>Over 51 Employees			.28				1.000
Active Aggression				3	3.076	.029	
0	157	36.29					
1 to 15 Employees	30	41.50					
16 to 50 Employees	17	45.41					
Over 51 Employees	8	49.38					
Over 51 Employees>0			13.082				.163
Over 51 Employees>1 to 15 Employees			7.865				.665
Over 51 Employees>16 to 50 Employee			3.965				.951
Passive Aggression				3	1.212	.306	
0	165	31.05					
1 to 15 Employees	29	35.38					
16 to 50 Employees	17	34.00					
Over 51 Employees	9	37.00					

Table 4-40 Continued

Variable and Number of Employees Supervised	N	Mean	Mean Difference	df	F	p-value	Tukey Post Hoc Comparison
Direct Aggression				3	3.232	.023	
0	155	33.17					
1 to 15 Employees	31	38.26					
16 to 50 Employees	17	41.06					
Over 51 Employees	8	45.75					
Over 51 Employees>0			12.576				.125
Over 51 Employees>1 to 15 Employees			7.492				.626
Over 51 Employees>16 to 50 Employee			4.691				.898
Indirect Aggression				3	2.174	.092	
0	171	23.17					
1 to 15 Employees	31	27.65					
16 to 50 Employees	17	27.88					
Over 51 Employees	10	26.50					
Intention to Leave				3	.242	.867	
0	174	12.48					
1 to 15 Employees	32	12.50					
16 to 50 Employees	17	12.65					
Over 51 Employees	9	11.11					

For categorical variables, Chi-square tests were used to compare differences in *Gender* according to *Number of Employees Supervised*. There was not a significant association between *Number of Employees Supervised* and *Gender* $\chi^2(3) = 7.279, p = .064$. The results of Chi-square analysis of differences in *Gender* according to *Number of Employees Supervised* are presented in Table 4-41.

Table 4-41

Chi-square Analysis of Differences in Gender According to Number of Employees Supervised: (N=241)

Variables	N	Male	Female	Chi-square Value	df	p-value
Number of Employees Supervised				7.279	3	.064
0	178	42.3%	31.5%			
1 to 15 Employees	35	11.6%	2.9%			
16 to 50 Employees	18	5.4%	2.1%			
Over 51 Employees	10	2.5%	1.7%			

Chi-square tests were used to compare differences in *Race* according to *Number of Employees Supervised*. There was a significant association between *Number of Employees Supervised* and *Race* $\chi^2(12) = 44.356, p = .000$. The frequency of *White* employees was significantly higher for employees in the *0 Employees Supervised* group (69.7%) than any other *Race* according to *Number of Employees Supervised*. The results of Chi-square analysis of differences in *Race* according to *Number of Employees Supervised* are shown in Table 4-42.

Table 4-42

Chi-square Analysis of Differences in Race According to Number of Employees Supervised: (N=241)

Variables	N	White	Black or African American	American Indian or Alaska Native	Asian	Chi-square Value	df	p-value
Number of Employees Supervised						44.356	12	.000
0	78	69.7%	2.1%	.0%	.8%			
1 to 15 Employees	35	11.6%	1.7%	.0%	.8%			
16 to 50 Employees	18	5.8%	.8%	.0%	.8%			
Over 51 Employees	10	2.5%	.8%	.4%	.4%			

Chi-square tests were also used to compare differences in *Ethnicity* according to *Number of Employees Supervised*. There was not a significant association between *Number of Employees Supervised* and *Ethnicity* $\chi^2(3) = .959, p = .811$. The results of Chi-square analysis of differences in *Ethnicity* according to *Number of Employees Supervised* are shown in Table 4-43.

Table 4-43

Chi-square Analysis of Differences in Ethnicity According to Number of Employees Supervised: (N=241)

Variable	N	Hispanic or Latino	Not Hispanic or Latino	Chi-square Value	df	p-value
Number of Employees Supervised				.959	3	.811
0	178	5.0%	68.9%			
1 to 15 Employees	35	1.2%	13.3%			
16 to 50 Employees	18	.4%	7.1%			
Over 51 Employees	10	.0%	4.1%			

Differences in Employee Demographics According to Supervisory Level

For comparison of employee demographics multiple one-way ANOVA tests were performed. For categorical variables, Chi-square tests were used. The variable was recoded into five *Supervisory Levels* so that the different supervisory categories could be compared. There was a significant effect of *Supervisory Level* on *Highest Level of Education* ($p = .000$). *Supervisory Level* was significantly higher for employees in the *Manager* category ($M = 3.19$), than for almost all the groups ($p = < .05$). Perceptions of *Organizational Justice* (total scale) was significantly higher for employees in the *Executive (VP Level and Higher)* group ($M = 81.80$), than for almost all the groups ($p = < .05$). *Organizational Justice* (total scale) was higher for employees in the *Executive Level* than the *None* group ($p = .183$), *Team Leader* ($p = .252$), *First Line Supervisor* groups ($p = .423$), and *Manager* groups ($p = .902$), but these differences were not significant.

Procedural Justice was also significantly higher for employees in the *Executive (VP Level and Higher)* group ($M = 29.40$), than for all the groups ($p = < .05$). *Procedural Justice* was higher for employees in the *Executive (VP Level and Higher)*

group than it was for those in the *First Line Supervisor* group ($p = .055$), and the *Manager* group ($p = .595$), however, these differences were not significant. *Indirect Workplace Aggression* was significantly higher for employees in the *Manager* group ($M = 30.64$) than for the other groups ($p = < .05$). Results of ANOVA of comparison of *Employee Demographics, Organizational Justice, Workplace Aggression, and Intention to Leave* according to *Supervisory Level* are presented in Table 4-44.

Table 4-44

Comparison of Employee Demographic Characteristics, Organizational Justice, Workplace Aggression Behaviors, and Intention to Leave According to Supervisory Level: ANOVA and Post Hoc Comparisons

Variable and Supervisory Level	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
Age				4	1.571	.183	
None	151	3.80					
Team Leader	34	3.53					
First Line Supervisor	18	3.89					
Manager (Oversee First Line)	32	4.28					
Executive (VP Level and Higher)	6	4.50					
Highest Level of Education				4	5.966	.000	
None	151	2.78					
Team Leader	34	2.97					
First Line Supervisor	18	2.44					
Manager (Oversee First Line)	32	3.19					
Executive (VP Level and Higher)	6	2.83					
Manager > None			.406				.003
Manager > Team Leader			.217				.536
Manager > First Line Supervisor			.743				.000
Manager > Executive			.354				.632
Organizational Justice (Total Scale)				4	2.902	.023	
None	134	66.75					
Team Leader	31	67.06					
First Line Supervisor	16	68.56					
Manager (Oversee First Line)	27	75.33					
Executive (VP Level and Higher)	5	81.80					
Executive > None			15.05				.183
Executive > Team Leader			14.74				.252
Executive > First Line Supervisor			13.24				.423
Executive > Manager			6.47				.902

Table 4-44 Continued

Variable and Number of Employees Supervised	N	Mean	Mean Difference	df	F	p-value	Tukey Post Hoc Comparison
Procedural Justice				4	6.512	.000	
None	143	20.50					
Team Leader	34	21.35					
First Line Supervisor	18	21.39					
Manager (Oversee First Line)	30	25.30					
Executive (VP Level and Higher)	5	29.40					
Executive > None			8.90				.008
Executive > Team Leader			8.05				.036
Executive > First Line Supervisor			8.01				.055
Executive > Manager			4.10				.595
Distributive Justice				4	1.317	.264	
None	148	13.75					
Team Leader	33	13.03					
First Line Supervisor	18	13.28					
Manager (Oversee First Line)	30	15.07					
Executive (VP Level and Higher)	6	15.17					
Interpersonal Justice				4	.282	.890	
None	148	15.15					
Team Leader	34	15.71					
First Line Supervisor	17	15.76					
Manager (Oversee First Line)	32	15.75					
Executive (VP Level and Higher)	6	15.67					
Informational Justice				4	.307	.873	
None	143	17.20					
Team Leader	32	17.66					
First Line Supervisor	17	16.82					
Manager (Oversee First Line)	31	17.87					
Executive (VP Level and Higher)	6	18.33					
WAR-Q (Total Score)				4	1.791	.132	
None	124	96.31					
Team Leader	25	96.28					
First Line Supervisor	15	105.93					
Manager (Oversee First Line)	25	121.52					
Executive (VP Level and Higher)	4	111.25					
Verbal Aggression				4	1.206	.309	
None	136	53.43					
Team Leader	28	51.68					
First Line Supervisor	17	60.24					
Manager (Oversee First Line)	28	64.75					
Executive (VP Level and Higher)	5	56.00					

Table 4-44 Continued

Variable and Number of Employees Supervised	N	Mean	Mean Difference	df	F	p-value	Tukey Post Hoc Comparison
Physical Aggression				4	1.830	.124	
None	144	15.85					
Team Leader	30	14.97					
First Line Supervisor	16	17.69					
Manager (Oversee First Line)	31	19.10					
Executive (VP Level and Higher)	6	16.83					
Active Aggression				4	1.071	.372	
None	135	37.37					
Team Leader	27	35.11					
First Line Supervisor	16	41.81					
Manager (Oversee First Line)	29	43.34					
Executive (VP Level and Higher)	5	38.20					
Passive Aggression				4	1.786	.133	
None	141	30.79					
Team Leader	29	35.41					
First Line Supervisor	17	38.00					
Manager (Oversee First Line)	28	34.00					
Executive (VP Level and Higher)	5	32.09					
Direct Aggression				4	1.093	.361	
None	134	34.13					
Team Leader	26	32.23					
First Line Supervisor	17	38.71					
Manager (Oversee First Line)	29	39.45					
Executive (VP Level and Higher)	5	35.80					
Indirect Aggression				4	3.132	.016	
None	147	22.95					
Team Leader	30	23.53					
First Line Supervisor	18	27.00					
Manager (Oversee First Line)	28	30.64					
Executive (VP Level and Higher)	6	22.50					
Manager > None			7.70				.009
Manager > Team Leader			7.11				.113
Manager > First Line Supervisor			3.64				.817
Manager > Executive			8.14				.486
Intention to Leave				4	1.290	.275	
None	149	12.71					
Team Leader	31	12.90					
First Line Supervisor	17	11.76					
Manager (Oversee First Line)	30	11.63					
Executive (VP Level and Higher)	5	18.60					

Chi-square tests were used to compare differences in *Gender* according to *Supervisory Level*. There was a significant association between *Supervisory Level* and *Gender* $\chi^2 (4) = 13.580, p = .009$. Both frequencies for *Males* (36.1%) and *Females* (26.6%) were highest in the *None Supervisory Level* group. For the *Manager* level, *Males* (12.0%) were higher than *Females* (1.2%). *Female* frequencies also were highest in the *Team Leader* group (6.6%). The results of Chi-square analysis of differences in *Gender* according to *Supervisory Level* are shown in Table 4-45.

Table 4-45

Chi-square Analysis of Differences in Gender According to Supervisory Level: (N=241)

Variables	N	Male	Female	Chi-square		
				Value	df	p-value
Supervisory Level				13.580	4	.009
None	151	36.1%	26.6%			
Team Leader	34	7.5%	6.6%			
First Line Supervisor	18	4.6%	2.9%			
Manager (Oversee First Line)	32	12.0%	1.2%			
Executive (VP Level and Higher)	6	1.7%	.8%			

For categorical variables, Chi-square tests were used to compare differences in *Race* according to *Supervisory Level*. There was a significant association between *Supervisory Level* and *Race* $\chi^2 (16) = 56.850, p = .000$. *White* employees comprised most of the sample, while *Black or African American* employees were highest in the *None Supervisory Level* group (2.9%), followed by *Asian* employees reporting highest in the *Manager* group (1.2%). *White* employees were also overwhelming higher in the different *Supervisory Level* groups than any other *Race*. The results of Chi-square analysis of differences in *Race* according to *Supervisory Level* are shown in Table 4-46.

Table 4-46

Chi-square Analysis of Differences in Race According to Supervisory Level: (N=241)

Variables	N	White	Black or African American	American Indian or Alaska Native	Asian	Chi-square Value	df	p-value
Supervisory Level						56.850	16	.000
None	151	57.7%	2.9%	.0%	.8%			
Team Leader	34	12.9%	.8%	.0%	.0%			
First Line Supervisor	18	6.6%	.0%	.0%	.8%			
Manager (Oversee First Line)	32	10.4%	1.7%	.0%	1.2%			
Executive (VP Level and Higher)	6	2.1%	.0%	.4%	.0%			

Chi-square tests were also used to compare differences in *Ethnicity* according to *Supervisory Level*. There was not a significant association between *Supervisory Level* and *Ethnicity* $\chi^2(4) = 2.523, p = .641$. The results of Chi-square analysis of differences in *Ethnicity* according to *Supervisory Level* are shown in Table 4-47.

Table 4-47

Chi-square Analysis of Differences in Ethnicity According to Supervisory Level: (N=241)

Variables	N	Hispanic or Latino	Not-Hispanic or Latino	Chi-square Value	df	p-value
Supervisory Level				2.523	4	.641
None	151	4.1%	58.5%			
Team Leader	34	1.2%	12.9%			
First Line Supervisor	18	.0%	7.5%			
Manager (Oversee First Line)	32	.8%	12.4%			
Executive (VP Level and Higher)	6	.4%	2.1%			

Differences in Employee Demographics According to Number of Employees at Work Location

For comparison of employee demographics according to *Number of Employees at Work Location*, multiple one-way ANOVA and Chi-square tests were performed. There

was not a significant effect on *Age, Highest Level of Education, Organizational Justice, Workplace Aggression Behaviors and Intention to Leave*, according to *Number of Employees at Work Location*. Although not significant, a trend relationship resulted between *Number of Employees at Work Location* and *Highest Level of Education* ($p = .097$). Employees who worked in locations of *Over 250 Employees* reported *Highest Levels of Education* ($M = 2.93$) than the other *Number of Employees at Work Location* categories. Results of ANOVA of comparison of *Employee Demographics, Organizational Justice, Workplace Aggression, and Intention to Leave* according to *Number of Employees at Work Location* are presented in Table 4-48.

Table 4-48

Comparison of Employee Demographic Characteristics, Organizational Justice, Workplace Aggression Behaviors, and Intention to Leave According to Number of Employees at Work Location: ANOVA and Post Hoc Comparisons

Variable and Number of Employees at Work Location	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
Age				3	1.893	.131	
1 to 4 Employees	20	4.40					
5 to 49 Employees	43	4.02					
50 to 249 Employees	80	3.86					
Over 250 Employees	98	3.65					
Highest Level of Education				3	2.127	.097	
1 to 4 Employees	20	2.65					
5 to 49 Employees	43	2.88					
50 to 249 Employees	80	2.75					
Over 250 Employees	98	2.93					
Organizational Justice (Total Scale)				3	.290	.833	
1 to 4 Employees	16	69.94					
5 to 49 Employees	41	68.17					
50 to 249 Employees	70	69.40					
Over 250 Employees	86	67.35					
Procedural Justice				3	1.346	.260	
1 to 4 Employees	17	23.47					
5 to 49 Employees	42	22.48					
50 to 249 Employees	75	21.41					
Over 250 Employees	96	20.82					

Table 4-48 Continued

Variable and Number of Employees Supervised	N	Mean	Mean Difference	df	F	p-value	Tukey Post Hoc Comparison
Distributive Justice				3	.540	.656	
1 to 4 Employees	20	14.00					
5 to 49 Employees	43	13.86					
50 to 249 Employees	78	14.21					
Over 250 Employees	94	13.44					
Interpersonal Justice				3	.391	.760	
1 to 4 Employees	20	14.75					
5 to 49 Employees	43	14.98					
50 to 249 Employees	79	15.59					
Over 250 Employees	95	15.48					
Informational Justice				3	.274	.844	
1 to 4 Employees	19	17.68					
5 to 49 Employees	42	16.81					
50 to 249 Employees	75	17.51					
Over 250 Employees	93	17.42					
WAR-Q (Total Score)				3	.557	.644	
1 to 4 Employees	15	99.40					
5 to 49 Employees	38	105.79					
50 to 249 Employees	61	94.84					
Over 250 Employees	79	102.86					
Verbal Aggression				3	.534	.659	
1 to 4 Employees	17	52.18					
5 to 49 Employees	40	58.13					
50 to 249 Employees	69	52.42					
Over 250 Employees	88	56.83					
Physical Aggression				3	.262	.853	
1 to 4 Employees	20	15.45					
5 to 49 Employees	42	17.00					
50 to 249 Employees	72	16.46					
Over 250 Employees	93	16.13					
Active Aggression				3	.478	.698	
1 to 4 Employees	18	37.89					
5 to 49 Employees	39	41.31					
50 to 249 Employees	68	37.49					
Over 250 Employees	87	37.56					
Passive Aggression				3	1.190	.315	
1 to 4 Employees	18	30.22					
5 to 49 Employees	42	32.17					
50 to 249 Employees	70	29.93					
Over 250 Employees	90	34.11					
Direct Aggression				3	.294	.830	
1 to 4 Employees	18	35.11					
5 to 49 Employees	39	37.18					
50 to 249 Employees	66	34.44					
Over 250 Employees	88	34.51					
Indirect Aggression				3	1.169	.322	
1 to 4 Employees	19	22.11					
5 to 49 Employees	41	25.54					
50 to 249 Employees	74	22.70					
Over 250 Employees	95	25.38					

Table 4-48 Continued

Variable and Number of Employees Supervised	N	Mean	Mean Difference	df	F	p-value	Tukey Post Hoc Comparison
Intention to Leave				3	.305	.822	
1 to 4 Employees	19	11.89					
5 to 49 Employees	43	12.05					
50 to 249 Employees	75	12.41					
Over 250 Employees	95	12.75					

For categorical variables, Chi-square tests were used to compare differences in *Gender* according to *Number of Employees at Work Location*. There was a significant association between *Number of Employees at Work Location* and *Gender* $\chi^2(3) = 16.388$, $p = .001$. The frequency of both *Male* employees (21.6%) and *Female* employees (19.1%) was highest in the *Over 250 Employees* group than any other group. The results of Chi-square analysis of differences in *Gender* according to *Number of Employees at Work Location* are shown in Table 4-49.

Table 4-49

Chi-square Analysis of Differences in Gender According to Number of Employees at Work Location: (N=241)

Variables	N	Male	Female	Chi-square Value	df	p-value
Number of Employees at Work Location				16.388	3	.001
1 to 4 Employees	20	7.5%	.8%			
5 to 49 Employees	43	14.1%	3.7%			
50 to 249 Employees	80	18.7%	14.5%			
Over 250 Employees	98	21.6%	19.1%			

Chi-square tests were used to compare differences in *Race* according to *Number of Employees at Work Location*. There was not a significant association between *Number of Employees at Work Location* and *Race* $\chi^2(12) = 4.483$, $p = .973$. The results of Chi-square analysis of differences in *Race* according to *Number of Employees at Work Location* are presented in Table 4-50.

Table 4-50

Chi-square Analysis of Differences in Race According to Number of Employees at Work Location: (N=241)

Variables	N	White	Black or African American	American Indian or Alaska Native	Asian	Chi-square Value	df	p-value
Number of Employees at Work Location						4.483	12	.973
1 to 4 Employees	20	7.5%	.4%	.0%	.4%			
5 to 49 Employees	43	15.8%	1.2%	.0%	.4%			
50 to 249 Employees	80	30.3%	1.7%	.4%	.4%			
Over 250 Employees	98	36.1%	2.1%	.0%	1.7%			

Chi-square tests were also used to compare differences in *Ethnicity (Hispanic or Latino or Not Hispanic or Latino)* according to *Number of Employees at Work Location*. There was not a significant association between *Number of Employees at Work Location* and *Ethnicity* $\chi^2(3) = 2.196, p = .533$. The results of Chi-square analysis of differences in *Ethnicity* according to *Number of Employees at Work Location* are presented in Table 4-51.

Table 4-51

Chi-square Analysis of Differences in Ethnicity According to Number of Employees at Work Location: (N=241)

Variables	N	Hispanic or Latino	Not Hispanic or Latino	Chi-square Value	df	p-value
Number of Employees at Work Location				2.196	3	.533
1 to 4 Employees	20	.4%	7.9%			
5 to 49 Employees	43	1.2%	16.6%			
50 to 249 Employees	80	1.2%	32.0%			
Over 250 Employees	98	3.7%	36.9%			

Differences in Employee Demographics According to Telecommunications Sector

For comparison of employee demographics according to *Telecommunications Sector*, multiple ANOVA and Chi-square tests were performed. The nominal categorical

variable was recoded into four telecom sectors, *Wireline*, *Wireless*, *Cable*, and *Satellite Communications*, so that the sectors could be compared. There was a significant effect of *Telecommunications Sector* on *Age* ($p = .029$). *Age* was significantly higher for employees in the *Wireline* sector ($M = 4.12$), ($p = < .05$). *Age* was also higher for those employees in the *Wireline* sector than it was in the *Wireless*, *Cable*, and *Satellite* sectors, but these differences were not significant.

There was not a significant effect of *Telecommunications Sector* on *Active Workplace Aggression Behaviors* ($p = .068$), however, a trend relationship resulted. *Satellite Telecommunications* employees reported higher mean scores ($M = 49.33$) for *Active Aggression* than the rest of the sectors. There was also a trend relationship between *Telecommunications Sector* and *Direct Workplace Aggression Behaviors* ($p = .055$). *Satellite Telecommunications* employees reported higher mean scores ($M = 45.67$) for *Direct Workplace Aggression* than the other sectors.

There was a significant effect of *Telecommunications Sector* on *Intention to Leave* ($p = .017$). *Intention to Leave* was significantly higher for employees in the *Satellite Telecommunications* sector ($M = 15.26$). *Intention to Leave* was also significantly higher for those employees in the *Satellite* sector than it was for the *Wireline* and *Cable Telecommunications* sectors. Results of ANOVA of comparison of *Employee Demographics*, *Organizational Justice*, *Workplace Aggression*, and *Intention to Leave* according to *Telecommunications Sector* are presented in Table 4-52.

Table 4-52

Comparison of Employee Demographic Characteristics, Organizational Justice, Workplace Aggression Behaviors, and Intention to Leave According to Telecommunications Sector: ANOVA and Post Hoc Comparisons

Variable and Telecommunications Sector	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
Age				3	3.055	.029	
Wireline	119	4.12					
Wireless	61	3.57					
Cable and Other Program Distributors	42	3.69					
Satellite and Telecommunications Resellers	19	3.42					
Wireline > Wireless			.544				.065
Wireline > Cable			.427				.321
Wireline > Satellite			.697				.181
Highest Level of Education				3	1.805	.147	
Wireline	119	2.83					
Wireless	61	2.97					
Cable and Other Program Distributors	42	2.74					
Satellite and Telecommunications Resellers	19	2.68					
Organizational Justice (Total Scale)				3	1.674	.174	
Wireline	105	66.65					
Wireless	58	69.28					
Cable and Other Program Distributors	32	73.25					
Satellite and Telecommunications Resellers	18	66.89					
Procedural Justice				3	1.994	.116	
Wireline	115	20.61					
Wireless	59	22.31					
Cable and Other Program Distributors	38	23.05					
Satellite and Telecommunications Resellers	18	21.44					
Distributive Justice				3	.596	.618	
Wireline	117	13.58					
Wireless	60	13.75					
Cable and Other Program Distributors	39	14.56					
Satellite and Telecommunications Resellers	19	13.95					
Interpersonal Justice				3	1.804	.147	
Wireline	117	15.12					
Wireless	61	15.39					
Cable and Other Program Distributors	40	16.58					
Satellite and Telecommunications Resellers	19	14.26					
Informational Justice				3	2.046	.108	
Wireline	112	16.97					
Wireless	61	17.54					
Cable and Other Program Distributors	37	18.81					
Satellite and Telecommunications Resellers	19	16.21					

Table 4-52 Continued

Variable and Telecommunications Sector	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
WAR-Q (Total Score)				3	1.760	.156	
Wireline	93	95.14					
Wireless	50	104.12					
Cable and Other Program Distributors	35	100.74					
Satellite and Telecommunications Resellers	15	122.80					
Passive Aggression				3	1.813	.146	
Wireline	106	30.40					
Wireless	56	34.16					
Cable and Other Program Distributors	39	31.28					
Satellite and Telecommunications Resellers	17	37.88					
Active Aggression				3	2.412	.068	
Wireline	105	36.56					
Wireless	54	37.72					
Cable and Other Program Distributors	38	39.32					
Satellite and Telecommunications Resellers	15	49.33					
Verbal Aggression				3	1.503	.215	
Wireline	107	52.32					
Wireless	55	57.05					
Cable and Other Program Distributors	35	55.80					
Satellite and Telecommunications Resellers	17	67.12					
Physical Aggression				3	1.551	.202	
Wireline	109	15.77					
Wireless	59	16.42					
Cable and Other Program Distributors	42	16.31					
Satellite and Telecommunications Resellers	17	19.71					
Direct Aggression				3	2.568	.055	
Wireline	104	33.69					
Wireless	54	34.31					
Cable and Other Program Distributors	38	35.53					
Satellite and Telecommunications Resellers	15	45.67					
Indirect Aggression				3	1.194	.313	
Wireline	112	23.03					
Wireless	60	25.27					
Cable and Other Program Distributors	40	24.73					
Satellite and Telecommunications Resellers	17	27.88					

Table 4-52 Continued

Variable and Telecommunications Sector	N	Mean	Mean Difference	df	F	p	Tukey Post Hoc Comparison
Intention to Leave				3	3.453	.017	
Wireline	113	12.04					
Wireless	60	13.00					
Cable and Other Program Distributors	40	11.40					
Satellite and Telecommunications Resellers	19	15.26					
Satellite > Wireline			3.23				.032
Satellite > Wireless			2.26				.268
Satellite > Cable			3.86				.019

For nominal categorical variables, Chi-square tests were used to compare differences in *Gender* according to *Telecommunications Sector*. There was not a significant effect of *Gender* on *Telecom Sector* ($p = .565$). The results of Chi-square analysis of differences in *Gender* according to *Telecommunications Sector* are presented in Table 4-53.

Table 4-53

Chi-square Analysis of Differences in Gender According to Telecommunications Sector: (N = 241)

Variables	N	Wireline	Wireless	Cable	Satellite	Chi-square Value	df	p-value
Gender						2.037	3	.565
Male	149	31.1%	16.6%	9.1%	5.0%			
Female	92	18.3%	8.7%	8.3%	2.9%			

Chi-square tests were used to compare differences in *Race* according to *Telecommunications Sector*. There was not a significant effect of *Race* on *Telecom Sector* ($p = .158$). The results of Chi-square analysis of differences in *Race* according to *Telecommunications Sector* are presented in Table 4-54.

Table 4-54

Chi-square Analysis of Differences in Race According to Telecommunications Sector: (N =241)

Variables	N	Wireline	Wireless	Cable	Satellite	Chi-square Value	df	p-value
Race						16.793	12	.158
White	216	46.1%	21.2%	15.4%	7.1%			
Black or African American	13	2.1%	1.7%	.8%	.8%			
American Indian or Alaskan Native	1	.0%	.4%	.0%	.0%			
Asian	7	.4%	2.1%	.4%	.0%			
Other	4	.8%	.0%	.8%	.0%			

There was not a significant effect of *Ethnicity* on *Telecommunications Sector* ($p = .703$). The results of Chi-square analysis of differences in *Ethnicity* according to *Telecommunications Sector* are presented in Table 4-55.

Table 4-55

Chi-square Analysis of Differences in Ethnicity According to Telecommunications Sector: (N =241)

Variables	N	Wireline	Wireless	Cable	Satellite	Chi-square Value	df	p-value
Ethnicity						1.413	3	.703
Hispanic or Latino	16	2.9%	2.5%	.8%	.4%			
Not Hispanic or Latino	225	46.5%	22.8%	16.6%	7.5%			

Results of Hypotheses Testing

Research Hypothesis 1

H1: Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of workplace aggression behaviors (passive-active, verbal-physical, direct-indirect).

To test Hypothesis 1, multiple regression analyses using the hierarchical (forward) method were performed to determine whether there was a significant

explanatory (correlational) relationship between *Organizational Justice* (procedural justice, distributive justice, interpersonal justice, and informational justice) and the dependent variables *workplace aggression behaviors* (passive-active, verbal-physical, direct-indirect). The four subscales of the *20-Item Organizational Justice* scale and the six subscales of the *60-Item Workplace Aggression Research Questionnaire (WAR-Q)* resulting from EFA were utilized.

Research Hypothesis 1 had seven separate hypotheses. Each hypothesis tested a different explanatory relationship among organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) and workplace aggression behaviors, *passive, active, verbal, physical, direct, indirect, and total score*.

The dependent variable changed as follows: H1_a *passive* workplace aggression behaviors, H1_b *active* workplace aggression behaviors, H1_c *verbal* workplace aggression behaviors, H1_d *physical* workplace aggression behaviors, H1_e *direct* workplace aggression behaviors, H1_f *indirect* workplace aggression behaviors, and H1_g *total score* workplace aggression behaviors. The analysis of each individual hypothesis follows:

H1_a Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of *passive* workplace aggression behaviors.

To test Hypothesis 1_a, Pearson *r* correlations and multiple regression analyses using the hierarchical (forward) method were conducted to determine whether there was a significant explanatory (correlational) relationship between *Organizational Justice* (procedural justice, distributive justice, interpersonal justice, and informational justice) and the dependent variable, *passive workplace aggression behaviors*. The four subscales of the *20-Item Organizational Justice* scale and the *passive* subscale of the *60-Item*

Workplace Aggression Research Questionnaire (WAR-Q) resulting from EFA were utilized.

First, Pearson *r* correlation analyses were conducted to determine the order in which to enter the independent variables into the regression model. Pearson *r* correlations showed a significant inverse correlation between the four subscales from the *20-Item Organizational Justice* scale, and the *passive* subscale of the *60-Item Workplace Aggression Research Questionnaire*. The results were as follows: *Interpersonal Justice* ($r = -.436, p = .000$), *Informational Justice* ($r = -.432, p = .000$), *Distributive Justice* ($r = -.397, p = .000$), and *Procedural Justice* ($r = -.339, p = .000$). The results of Pearson *r* correlation between *Interpersonal Justice*, *Informational Justice*, *Distributive Justice*, and *Procedural Justice* subscales of the *20-Item Organizational Justice* scale, and the *passive aggression* subscale of the *60-Item Workplace Aggression Research Questionnaire* are presented in Table 4-56.

Table 4-56

Pearson r Correlation between the Organizational Justice Subscales, Interpersonal Justice, Informational Justice, Distributive Justice, Procedural Justice, and the Passive Aggression Subscale

Variables	Pearson <i>r</i>	<i>p</i> -value
Interpersonal Justice	-.436	.000
Informational Justice	-.432	.000
Distributive Justice	-.397	.000
Procedural Justice	-.339	.000

The four subscales from the *Organizational Justice* scale (interpersonal, procedural, distributive, and informational justice) and *passive aggression* were entered into a hierarchical forward linear regression model from the strongest Pearson *r*

correlation to the weakest. Collinearity statistics were examined. The VIF is a predictor of strong linear relationships with other predictors and may be a concern if over 10, while tolerance should be greater than .10 (Field, 2005). For the three models produced, the Variance Inflation Factor (VIF) ranged from 1.000 to 2.176, while the tolerance ranged from .460 to 1.000. These results were well within the recommended guidelines, suggesting multicollinearity was not a problem.

Three different models were produced from the hierarchical regression. Each model had significant F values which is the significance of the regression model as a whole. Model 1 had significant F values ($p = .000$), Model 2 ($p = .000$), and Model 3 ($p = .000$), also had significant F values. The *Adjusted R*² increased steadily from Model 1 (18.0%), to Model 2 (20.4%), to Model 3 (22.5%). Model 3 was selected as the best explanatory model to explain *passive aggression*. The explanatory model found was:

$$\text{passive aggression} = 63.944 \text{ (constant)} - .699 \text{ (Interpersonal Justice)} - .659 \text{ (Informational Justice)} - .700 \text{ (Distributive Justice)} + e$$

Analysis of individual predictors in Model 3 indicated three significant explanatory relationships between the three predictors and *passive aggression*. The standardized beta coefficient (β) for each of the three predictors indicated its relative importance in explaining *passive aggression*. *Distributive Justice* was the most important predictor ($t = -2.494$, $p = .013$, $\beta = -.191$) in the model. It had an inverse relationship with *passive aggression*. The inverse β value of *Distributive Justice* had a negative relationship with *passive aggression*. Higher *Distributive Justice* scores indicated that employees' perceived equitable returns for their efforts were acceptable and correlated

with lower *passive aggression*. Employees who responded with higher perceptions of *Distributive Justice* also reported lower experiences with *passive aggression* behaviors.

Informational Justice ($t = -2.235, p = .027, \beta = -.198$), was the second most important predictor in the model. It also had an inverse relationship with *passive aggression*. The inverse β value of *Informational Justice* had a negative relationship with *passive aggression*. Higher *Informational Justice* scores resulted in lower episodes of *passive aggression* behaviors.

Lastly, *Interpersonal Justice* was the third most important predictor ($t = -2.014, p = .045, \beta = -.189$) in the model. The inverse β value of *Interpersonal Justice* had a negative relationship with *passive aggression*. Higher *Interpersonal Justice* scores resulted in lower incidents of *passive aggression* behaviors.

According to the findings, Hypothesis 1_a was partially supported. *Informational Justice*, *Distributive Justice*, and *Interpersonal Justice* were significant negative explanatory variables of *passive workplace aggression behaviors*. The explanatory model explained a range of 22.5% to 23.7% of the variation in *passive workplace aggression behaviors*. The hierarchical (forward) multiple regression results for H1_a are summarized in Table 4-57.

Table 4-57

Hierarchical (Forward) Multiple Regression Analysis of Organizational Justice Subscales (Procedural, Distributive, Informational, and Interpersonal Justice), and Passive Workplace Aggression Behaviors

Variable	<i>F</i>	<i>df</i>	<i>p</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>Adjusted R</i> ²
Model 1	43.222	1	.00						.185	.180
(Constant)				56.712	3.887					
Interpersonal Justice Subscale				-1.591	.242	-.430	-6.574	.000		
Model 2	25.571	2	.00						.212	.204
(Constant)				60.910	4.163					
Interpersonal Justice Subscale				-1.009	.329	-.272	-3.071	.002		
Informational Justice Subscale				-.763	.296	-.229	-2.577	.011		
Model 3	19.589	3	.00						.237	.225
(Constant)				63.944	4.284					
Interpersonal Justice Subscale				-.699	.347	-.189	-2.014	.045		
Informational Justice Subscale				-.659	.295	-.198	-2.235	.027		
Distributive Justice Subscale				-.700	.281	-.191	-2.494	.013		

H_{1b} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of *active* workplace aggression behaviors.

To test Hypothesis 1_b, Pearson *r* correlations and multiple regression analyses using the hierarchical (forward) method were conducted to determine whether there was a significant explanatory (correlational) relationship between organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) and the dependent variable, *active* workplace aggression behaviors. The four subscales of the *20-Item Organizational Justice* scale and the *active* subscale of the *60-Item Workplace Aggression Research Questionnaire (WAR-Q)* resulting from EFA were utilized.

First, Pearson r correlation analyses were conducted to determine the order in which to enter the independent variables into the regression model. Pearson r correlations showed a significant inverse correlation between the four subscales from the *20-Item Organizational Justice* scale and *active* subscale of the *60-Item Workplace Aggression Research Questionnaire*. The results were as follows: *Interpersonal Justice* ($r = -.345, p = .000$), *Informational Justice* ($r = -.215, p = .000$), *Distributive Justice* ($r = -.208, p = .000$), and *Procedural Justice* ($r = -.197, p = .000$). The results of Pearson r correlation between *Interpersonal Justice*, *Informational Justice*, *Distributive Justice*, and *Procedural Justice* subscales of the *20-Item Organizational Justice* scale, and the *active aggression* subscale of the *60-Item Workplace Aggression Research Questionnaire* are presented in Table 4-58.

Table 4-58

Pearson r Correlation between the Organizational Justice Subscales, Interpersonal Justice, Informational Justice, Distributive Justice, Procedural Justice, and the Active Aggression Subscale

Variables	Pearson r	p -value
Interpersonal Justice	-.345	.000
Informational Justice	-.215	.002
Distributive Justice	-.208	.003
Procedural Justice	-.197	.005

The four subscales from the *Organizational Justice* scale (procedural justice, distributive justice, interpersonal justice, and informational justice) and *active aggression* were entered into a hierarchical forward linear regression model from the strongest Pearson r correlation to the weakest. Collinearity statistics were examined. The VIF is a predictor of strong linear relationships with other predictors and may be a concern if over 10, while tolerance should be greater than .10 (Field, 2005). For the one model produced,

the Variance Inflation Factor (VIF) was 1.000, while the tolerance was 1.000. These results were well within the recommended guidelines, suggesting multicollinearity was not a problem.

One model was produced from the hierarchical regression. The model was significant for an explanatory relationship ($p = .000$). The R^2 was 13.1% and the adjusted R^2 was 12.7%, indicating that *Interpersonal Justice* accounted for 12.7% to 13.1% of the variation in *active aggression behaviors*. The explanatory model found was:

$$\text{active aggression} = 65.049 (\text{constant}) - 1.688 (\text{Interpersonal Justice}) + e$$

Analysis of the predictor in the model indicated one significant explanatory relationship between one predictor and *active aggression*. The standardized beta coefficient (β) for the predictor indicated its relative importance in explaining *active aggression*. *Interpersonal Justice* ($t = -5.34$, $p = .000$, $\beta = -.363$), was the only important predictor in the model. The inverse β value of *Interpersonal Justice* had a negative relationship with *active aggression*. Higher perceptions of *Interpersonal Justice* resulted in lower episodes of *active aggression* behaviors.

According to the findings, Hypothesis 1_b was partially supported. *Interpersonal Justice* was a significant negative explanatory variable of *active workplace aggression* behaviors. The explanatory model explained a range of 12.7% to 13.1% of the variation in *active workplace aggression* behaviors. The hierarchical (forward) multiple regression results for H1_b are presented in Table 4-59.

Table 4-59

Hierarchical (Forward) Multiple Regression Analysis of Organizational Justice and the Active Workplace Aggression Behaviors Subscale

Variable	<i>F</i>	<i>df</i>	<i>p</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	<i>R</i> ²	Adjusted <i>R</i> ²
Model 1	28.460	1	.000						.131	.127
(Constant)				65.049	5.085					
Interpersonal Justice Subscale				-1.688	.316	-.363	-5.34	.000		

H_{1c} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of *verbal* workplace aggression behaviors.

To test Hypothesis 1_c, Pearson *r* correlations and multiple regression analyses using the hierarchical (forward) method were conducted to determine whether there was a significant explanatory (correlational) relationship between *Organizational Justice* (procedural justice, distributive justice, interpersonal justice, and informational justice) and the dependent variable, *verbal workplace aggression behaviors*. The four subscales of the *20-Item Organizational Justice* scale and the *verbal* subscale from the *60-Item Workplace Aggression Research Questionnaire (WAR-Q)* resulting from EFA were utilized.

First, Pearson *r* correlation analyses were conducted to determine the order in which to enter the independent variables into the regression model. Pearson *r* correlations showed a significant inverse correlation between the four subscales of the *20-Item Organizational Justice* scale and the *verbal* subscale of the *60-Item Workplace Aggression Research Questionnaire*. The results were as follows: *Interpersonal Justice* ($r = -.484, p = .000$), *Informational Justice* ($r = -.407, p = .009$), *Distributive Justice* ($r = -.386, p = .000$), and *Procedural Justice* ($r = -.362, p = .083$). The results of Pearson *r* correlation between *Interpersonal Justice*, *Informational Justice*, *Distributive*

Justice, and *Procedural Justice* subscales of the *20-Item Organizational Justice Scale*, and the *verbal* subscale from the *60-Item Workplace Aggression Research Questionnaire* are presented in Table 4-60.

Table 4-60

Pearson r Correlation between the Organizational Justice Subscales, Interpersonal Justice, Informational Justice, Distributive Justice, Procedural Justice, and the Verbal Aggression Subscale

Variables	Pearson <i>r</i>	<i>p</i> -value
Interpersonal Justice	-.484	.000
Informational Justice	-.407	.000
Distributive Justice	-.386	.000
Procedural Justice	-.362	.000

The four subscales from the *Organizational Justice* scale (procedural justice, distributive justice, interpersonal justice, and informational justice) and *verbal aggression* were entered into a hierarchical forward linear regression model from the strongest Pearson *r* correlation to the weakest. Collinearity statistics were examined. The VIF is a predictor of strong linear relationships with other predictors and may be a concern if over 10, while tolerance should be greater than .10 (Field, 2005). For the two models produced, the Variance Inflation Factor (VIF) ranged from 1.000 to 1.416 and the tolerance ranged from .706 to 1.000. These results were well within the recommended guidelines, suggesting multicollinearity was not a problem.

Two different models were produced from the hierarchical regression. Each model had significant *F* values which is the significance of the regression model as a whole. Model 1 had significant *F* values ($p = .000$) and Model 2 also had significant *F* values ($p = .000$). The *Adjusted R*² increased steadily from Model 1 (24.3%), to Model 2

(25.6%). Model 2 was selected as the best explanatory model to explain *verbal* workplace aggression behavior. The best explanatory model found was:

$$\begin{aligned} \text{verbal aggression} = & 117.024 \text{ (constant)} - 2.970 \text{ (Interpersonal Justice)} \\ & - 1.118 \text{ (Distributive Justice)} + e \end{aligned}$$

Analysis of individual predictors in Model 2 indicated two significant explanatory relationships between the two predictors and *verbal aggression*. The standardized beta coefficient (β) for each of the two predictors indicated its relative importance in explaining *verbal aggression*. *Interpersonal Justice* ($t = -5.503, p = .000, \beta = -.412$), was the most important predictor in the model. It had an inverse relationship with *verbal aggression*. Employees who experienced greater perceptions of *Interpersonal Justice* also experienced lower *verbal aggression* episodes.

Distributive Justice ($t = -2.096, p = .037, \beta = -.157$), was the second most important predictor in the model. It also had an inverse relationship with *verbal aggression*. Higher *Distributive Justice* results correlated with lower *verbal aggression*. Employees who responded with high perceptions of *Distributive Justice* also reported lower experiences with *verbal aggression* behaviors.

According to the findings, Hypothesis 1_c was partially supported. *Interpersonal Justice* and *Distributive Justice* were significant negative explanatory variables of *verbal workplace aggression behaviors*. The explanatory model explained a range of 25.6% to 26.4% of the variation in *verbal workplace aggression behaviors*. The hierarchical (forward) multiple regression results for H1_c are summarized in Table 4-61.

Table 4-61

Hierarchical (Forward) Multiple Regression Analysis of Organizational Justice and Verbal Workplace Aggression Behaviors

Variable	<i>F</i>	<i>df</i>	<i>p</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>Adjusted R</i> ²
Model 1	61.285	1	.00						.247	.243
(Constant)				111.092	7.353					
Interpersonal Justice Subscale				-3.583	.458	-.497	-7.83	.000		
Model 2										
(Constant)	33.396	2	.00						.264	.256
Interpersonal Justice Subscale				117.024	7.818					
Distributive Justice Subscale				-2.970	.540	-.412	-5.50	.000		
Informational Justice Subscale				-1.118	.534	-.157	-2.10	.037		

H_{1d} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of *physical* workplace aggression behaviors.

To test Hypothesis 1_d, Pearson *r* correlations and multiple regression analyses using the hierarchical (forward) method were conducted to determine whether there was a significant explanatory (correlational) relationship between organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) and the dependent variable, *physical* workplace aggression behaviors. The four subscales of the *20-Item Organizational Justice* scale and the *physical* subscale of the *60-Item Workplace Aggression Research Questionnaire (WAR-Q)* resulting from EFA were utilized.

First, Pearson *r* correlation analyses were conducted to determine the order in which to enter the independent variables into the regression model. Pearson *r* correlations showed a significant inverse correlation between the three subscales and one trend relationship from the *20-Item Organizational Justice* scale, and the *physical* subscale of the *60-Item Workplace Aggression Research Questionnaire*. The results were

as follows: *Interpersonal Justice* ($r = -.244, p = .000$), *Informational Justice* ($r = -.177, p = .009$), *Distributive Justice* ($r = -.138, p = .040$), and the trend relationship, *Procedural Justice* ($r = -.118, p = .083$). The results of Pearson r correlation between *Interpersonal Justice*, *Informational Justice*, *Distributive Justice*, and the *Procedural Justice* subscales of the *20-Item Organizational Justice* scale, and the *physical aggression* subscale of the *60-Item Workplace Aggression Research Questionnaire* are presented in Table 4-62.

Table 4-62

Pearson r Correlation between the Organizational Justice Subscales, Interpersonal Justice, Informational Justice, Distributive Justice, Procedural Justice, and the Physical Aggression Subscale

Variables	Pearson r	p -value
Interpersonal Justice	-.244	.000
Informational Justice	-.177	.009
Distributive Justice	-.138	.040
Procedural Justice	-.118	.083

Three significant inverse Pearson r variables and one trend variable from the *Organizational Justice* scale (procedural justice, distributive justice, interpersonal justice, and informational justice) and *physical aggression* were entered into a hierarchical forward linear regression model. The variables were arranged based on the order of the strongest Pearson r correlations to the weakest, until the model with the highest explanatory power (R^2) and adjusted R was produced. Collinearity statistics were examined. The VIF is a predictor of strong linear relationships with other predictors and may be a concern if over 10, while tolerance should be greater than .10 (Field, 2005). For the one model produced, the Variance Inflation Factor (VIF) was 1.000 and the

tolerance was 1.000. These results were well within the recommended guidelines, suggesting multicollinearity was not a problem.

One model was produced from the hierarchical regression. The model was significant for an explanatory relationship ($p = .000$). The R^2 was 5.8% and the adjusted R^2 was 6.2%, indicating that *Interpersonal Justice* accounted for 5.8% to 6.2% of the variation in *physical aggression*. The explanatory model found was:

$$\text{physical aggression} = 23.615 (\text{constant}) - .459 (\text{Interpersonal Justice subscale}) + e$$

Analysis of the predictor in the model indicated one significant explanatory relationship between one predictor and *physical aggression*. The standardized beta coefficient (β) for the predictor indicated its relative importance in explaining *physical aggression*. *Interpersonal Justice* ($t = -3.655$, $p = .000$, $\beta = -.250$), was the only predictor in the model. The inverse β value of *Interpersonal Justice* had a negative relationship with *physical aggression*. Higher *Interpersonal Justice* scores resulted in lower episodes of *physical aggression* behaviors.

According to the findings, Hypothesis 1_d was partially supported. *Interpersonal Justice* was a significant negative explanatory variable of *physical* workplace aggression behaviors. The explanatory model explained a range of 5.8% to 6.2% of the variation in *physical* workplace aggression behaviors. The hierarchical (forward) multiple regression results for H1_d are presented in Table 4-63.

Table 4-63

Hierarchical (Forward) Multiple Regression Analysis of Organizational Justice and Physical Workplace Aggression Behaviors

Variable	<i>F</i>	<i>df</i>	<i>p</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	<i>R</i> ²	Adjusted <i>R</i> ²
Model 1	13.360	1	.000						.062	.058
(Constant)				23.615	2.012					
Interpersonal Justice Subscale				-.459	.126	-.250	-3.66	.000		

H_{1e} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of *direct* workplace aggression behaviors.

To test Hypothesis 1_e, Pearson *r* correlations and multiple regression analyses using the hierarchical (forward) method were conducted to determine whether there was a significant explanatory (correlational) relationship between *Organizational Justice* (procedural justice, distributive justice, interpersonal justice, and informational justice) and the dependent variable, *direct workplace aggression behaviors*. The four subscales of the *20-Item Organizational Justice* scale and the *direct* subscale of the *60-Item Workplace Aggression Research Questionnaire (WAR-Q)* resulting from EFA were utilized.

First, Pearson *r* correlation analyses were conducted to determine the order in which to enter the independent variables into the regression model. Pearson *r* correlations showed a significant inverse correlation between the four subscales from the *20-Item Organizational Justice* scale. The results were as follows: *Interpersonal Justice* ($r = -.342, p = .000$), *Distributive Justice* ($r = -.209, p = .003$), *Informational Justice* ($r = -.208, p = .003$), and *Procedural Justice* ($r = -.192, p = .006$). The results of Pearson *r* correlation between *Interpersonal Justice*, *Informational Justice*, *Distributive Justice*, and *Procedural Justice* subscales, of the *Organizational Justice Scale*, and the

direct aggression subscale of the *60-Item Workplace Aggression Research Questionnaire* are presented in Table 4-64.

Table 4-64

Pearson r Correlation between the Organizational Justice Subscales, Interpersonal Justice, Informational Justice, Distributive Justice, Procedural Justice, and the Direct Aggression Subscale

Variables	Pearson <i>r</i>	<i>p</i> -value
Interpersonal Justice	-.342	.000
Distributive Justice	-.209	.003
Informational Justice	-.208	.003
Procedural Justice	-.192	.006

The four subscales from the *Organizational Justice* scale (procedural justice, distributive justice, interpersonal justice, and informational justice) and *direct aggression* were entered into a hierarchical forward linear regression model from the strongest Pearson *r* correlation to the weakest. Collinearity statistics were examined. The VIF is a predictor of strong linear relationships with other predictors and may be a concern if over 10, while tolerance should be greater than .10 (Field, 2005). For the one model produced, the Variance Inflation Factor (VIF) was 1.000 and the tolerance was 1.000. These results were well within the recommended guidelines, suggesting multicollinearity was not a problem.

One model was produced from the hierarchical regression. The model was significant for an explanatory relationship ($p = .000$). The R^2 was 12.8% and the adjusted R^2 was of 12.3%, indicating that *Interpersonal Justice* accounted for 12.3% to 12.8% of the variation in *direct aggression*. The explanatory model found was:

$$\text{direct aggression} = 59.255 \text{ (constant)} - 1.528 \text{ (Interpersonal Justice subscale)} + e$$

Analysis of the predictor in the model indicated one significant explanatory relationship between one predictor and *direct aggression*. The standardized beta coefficient (β) for the predictor indicated its relative importance in explaining *direct aggression*. *Interpersonal Justice* ($t = -5.228, p = .000, \beta = -.358$), was the only important predictor in the model. The inverse β value of *Interpersonal Justice* had a negative relationship with *direct aggression*. Higher *Interpersonal Justice* resulted in lower incidents of *direct aggression behaviors*.

According to the findings, Hypothesis 1_e was partially supported. *Interpersonal Justice* was a significant negative explanatory variable of *direct workplace aggression behaviors*. The explanatory model explained a range of 12.3% to 12.8% of the variation in *direct workplace aggression behaviors*. The hierarchical (forward) multiple regression results for H1_e are presented in Table 4-65.

Table 4-65

Hierarchical (Forward) Multiple Regression Analysis of Organizational Justice and Direct Workplace Aggression Behaviors

Model	F	df	p	B	SE	β	t	p	R ²	Adjusted R ²
Model 1	27.336	1	.000						.128	.123
(Constant)				59.255	4.704					
Interpersonal Justice Subscale				-1.528	.292	-.358	-5.23	.000		

H1_f Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of *indirect* workplace aggression behaviors.

To test Hypothesis 1_f, Pearson *r* correlations and multiple regression analyses using the hierarchical (forward) method were conducted to determine whether there was a significant explanatory (correlational) relationship between *Organizational Justice*

(procedural justice, distributive justice, interpersonal justice, and informational justice) and the dependent variable, *indirect workplace aggression behaviors*. The four subscales of the *20-Item Organizational Justice* scale and the *indirect* subscale of the *60-Item Workplace Aggression Research Questionnaire (WAR-Q)* resulting from EFA were utilized.

First, Pearson *r* correlation analyses were conducted to determine the order in which to enter the independent variables into the regression model. Pearson *r* correlations showed a significant inverse correlation between the four subscales of the *20-Item Organizational Justice* scale and the *indirect* subscale of the *60-Item Workplace Aggression Research Questionnaire*. The results were as follows: *Interpersonal Justice* ($r = -.423, p = .000$), *Informational Justice* ($r = -.376, p = .000$), *Distributive Justice* ($r = -.339, p = .000$), and *Procedural Justice* ($r = -.307, p = .000$). The results of Pearson *r* correlation between *Interpersonal Justice*, *Informational Justice*, *Distributive Justice*, and *Procedural Justice* subscales of the *Organizational Justice Scale*, and the *indirect aggression* subscale of the *60-Item Workplace Aggression Research Questionnaire* are presented in Table 4-66.

Table 4-66

Pearson r Correlation between the Organizational Justice Subscales, Interpersonal Justice, Informational Justice, Distributive Justice, Procedural Justice, and the Indirect Aggression Subscale

Variables	Pearson <i>r</i>	<i>p</i> -value
Interpersonal Justice	-.423	.000
Informational Justice	-.376	.000
Distributive Justice	-.339	.000
Procedural Justice	-.307	.000

The four subscales from the *Organizational Justice* scale (procedural justice, distributive justice, interpersonal justice, and informational justice) and *indirect aggression* were entered into a hierarchical forward linear regression model from the strongest Pearson r correlation to the weakest. Collinearity statistics were examined. The VIF is a predictor of strong linear relationships with other predictors and may be a concern if over 10, while tolerance should be greater than .10 (Field, 2005). For the one model produced, the Variance Inflation Factor (VIF) was 1.000 and the tolerance was 1.000. These results were well within the recommended guidelines, suggesting multicollinearity was not a problem.

One model was produced from the hierarchical regression. The model was significant for an explanatory relationship ($p = .000$). The R^2 was 17.5% and the adjusted R^2 was of 17.1%, indicating that *indirect aggression* accounted for 17.1% to 17.5% of the variation in *Interpersonal Justice*. The explanatory model found was:

$$\textit{indirect aggression} = 42.881 (\text{constant}) - 1.209 (\textit{Interpersonal Justice}) + e$$

Analysis of the predictor in the model indicated one significant explanatory relationship between one predictor and *indirect aggression*. The standardized beta coefficient (β) for the predictor indicated its relative importance in explaining *indirect aggression*. *Interpersonal Justice* ($t = -6.505$, $p = .000$, $\beta = -.418$), was the most important predictor in the model. The inverse β value of *Interpersonal Justice* had a negative relationship with *indirect aggression*. Higher *Interpersonal Justice* scores resulted in lower incidents of *indirect aggression* behaviors.

According to the findings, Hypothesis 1_f was partially supported. *Interpersonal Justice* was a significant negative explanatory variable of *indirect workplace aggression*

behaviors. The explanatory model explained a range of 17.1% to 17.5% of the variation in *indirect workplace aggression behaviors*. The hierarchical (forward) multiple regression results for H1_f are presented in Table 4-67.

Table 4-67

Hierarchical (Forward) Multiple Regression Analysis of Organizational Justice and Indirect Workplace Aggression Behaviors

Variable	<i>F</i>	<i>df</i>	<i>p</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>Adjusted R</i> ²
Model 1	42.318	1	.00						.175	.171
(Constant)				42.881	2.982					
Interpersonal Justice Subscale				-1.209	.186	-.418	-6.505	.00		

H_{1g} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of *workplace aggression behaviors*. (Total score).

To test Hypothesis 1_g, Pearson *r* correlations and multiple regression analyses using the hierarchical (forward) method were conducted to determine whether there was a significant explanatory (correlational) relationship between *Organizational Justice* (procedural justice, distributive justice, interpersonal justice and informational justice) and the dependent variable, *total score workplace aggression behaviors*. The four subscales of the *20-Item Organizational Justice* scale and the *total score* of the *60-Item Workplace Aggression Research Questionnaire (WAR-Q)* resulting from EFA were utilized.

First, Pearson *r* correlation analyses were conducted to determine the order in which to enter the independent variables into the regression model. Pearson *r* correlations showed a significant inverse correlation between the four subscales of the *20-Item Organizational Justice* scale and the *total score* of the *60-Item Workplace Aggression Research Questionnaire*. The results were as follows: *Interpersonal Justice*

($r = -.455, p = .000$), *Informational Justice* ($r = -.371, p = .000$), *Distributive Justice* ($r = -.336, p = .000$), and *Procedural Justice* ($r = -.306, p = .000$). The results of Pearson r correlation between *Interpersonal Justice*, *Informational Justice*, *Distributive Justice*, and *Procedural Justice* subscales of the *20-Item Organizational Justice* scale and the *total score* of the *60-Item Workplace Aggression Research Questionnaire* are presented in Table 4-68.

Table 4-68

Pearson r Correlation between the 20-Item Organizational Justice Subscales, Interpersonal Justice, Informational Justice, Distributive Justice, Procedural Justice, and the Total Score of the 60-Item Workplace Aggression Research Questionnaire

Variables	Pearson r	p -value
Interpersonal Justice	-.455	.000
Informational Justice	-.371	.000
Distributive Justice	-.336	.000
Procedural Justice	-.306	.000

The four subscales from the *Organizational Justice* scale (procedural justice, distributive justice, interpersonal justice, and informational justice), and the *total score* of the *Workplace Aggression Research Questionnaire* were entered into a hierarchical forward linear regression model from the strongest Pearson r correlation to the weakest. Collinearity statistics were examined. The VIF is a predictor of strong linear relationships with other predictors and may be a concern if over 10, while tolerance should be greater than .10 (Field, 2005). For the one model produced, the Variance Inflation Factor (VIF) was 1.000, and the tolerance was 1.000. These results were well within the guidelines, suggesting multicollinearity was not a problem.

One model was produced from the hierarchical regression. The model was significant for an explanatory relationship ($p = .000$). The R^2 was 22.3% and the adjusted R^2 was of 21.8%, indicating that *Interpersonal Justice* accounted for 21.8% to 22.3% of the variation in *total score workplace aggression behaviors*. The explanatory model found was:

$$\text{total score aggression} = 190.168 (\text{constant}) - 5.680 (\text{Interpersonal Justice}) + e$$

Analysis of the predictor in the model indicated one significant explanatory relationship between one predictor and the *total score workplace aggression behaviors*. The standardized beta coefficient (β) for the predictor indicated its relative importance in explaining the *total score aggression behaviors*. *Interpersonal Justice* ($t = -7.000$, $p = .000$, $\beta = -.472$), was the most important predictor in the model. The inverse β value of *Interpersonal Justice* had a negative relationship with *total score workplace aggression behaviors*. Higher *Interpersonal Justice* scores resulted in lower reported incidents of *total score workplace aggression behaviors*.

According to the findings, Hypothesis 1_g was partially supported. *Interpersonal Justice*, was a significant negative explanatory variable of *total score workplace aggression behaviors*. The explanatory model explained a range of 21.8% to 22.3% of the variation in *total score workplace aggression behaviors*. The hierarchical (forward) multiple regression results for H1_g are presented in Table 4-69.

Table 4-69

Hierarchical (Forward) Multiple Regression Analysis of Organizational Justice and the Total Score of Workplace Aggression Behaviors

Variable	<i>F</i>	<i>df</i>	<i>p</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>Adjusted R</i> ²
Model 1	48.999	1	.00						.223	.218
(Constant)				190.168	13.048					
Interpersonal Justice Subscale				-5.680	.811	-.472	-7.000	.00		

Research Hypothesis 2

H2: Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant negative explanatory variables of intention to leave.

To test Hypothesis 2, Pearson *r* correlations and multiple regression analyses using the hierarchical (forward) method were conducted to determine whether there was a significant negative explanatory (correlational) relationship between organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) and the dependent variable, *Intention to Leave*. The four subscales of the *20-Item Organizational Justice* scale and the *5-Item Turnover Intention* scale resulting from EFA were utilized.

First, Pearson *r* correlation analyses were conducted to determine the order in which to enter the independent variables into the regression model. Pearson *r* correlations showed a negative significant correlation between the four subscales from the *20-Item Organizational Justice* scale and the *5-Item Turnover Intention* scale. The results were as follows: *Interpersonal Justice* ($r = -.316, p = .000$), *Procedural Justice* ($r = -.312, p = .000$), *Distributive Justice* ($r = -.308, p = .000$), and *Informational Justice* ($r = -.296, p = .000$). The results of Pearson *r* correlation between the *20-Item*

Organizational Justice Scale, and the *5-Item Turnover Intention Scale* are presented in Table 4-70.

Table 4-70

Pearson r Correlation between the Organizational Justice Subscales, Interpersonal Justice, Informational Justice, Distributive Justice, Procedural Justice, and the 5-Item Turnover Intention Scale

Variables	Pearson <i>r</i>	<i>p</i> -value
5-Item Turnover Intention Scale		
Interpersonal Justice	-.316	.000
Procedural Justice	-.312	.000
Distributive Justice	-.308	.000
Informational Justice	-.296	.000

The four subscales from the *Organizational Justice* scale (interpersonal justice, procedural justice, distributive justice, and informational justice) and the *5-Item Turnover Intention Scale* were entered into a hierarchical forward linear regression model from the strongest Pearson *r* correlation to the weakest. Collinearity statistics were examined. The VIF is a predictor of strong linear relationships with other predictors and may be a concern if over 10, while tolerance should be greater than .10 (Field, 2005). For the two models produced, the Variance Inflation Factor (VIF) ranged from 1.000 to 1.539, while the tolerance ranged from .650 to 1.000. These results were well within the guidelines, suggesting multicollinearity was not a problem.

Two models were produced from the hierarchical regression. Model 1 had significant *F* values ($p = .000$), which is the significance of the regression model as a whole. Model 2 also had significant *F* values ($p = .000$). The *Adjusted R*² increased steadily from Model 1 (9.3%) to Model 2 (10.9%). Model 2 was selected as the best explanatory model to explain *Intention to Leave*. The best explanatory model found was:

$$\textit{Intention to Leave} = 19.532 \text{ (constant)} - .252 \text{ (Interpersonal Justice)} - .142 \text{ (Procedural Justice)} + e$$

Analysis of the individual predictors in Model 2 indicated two significant explanatory relationships with *Intention to Leave*. The standardized beta coefficient (β) for each of the two predictors indicated its relative importance in explaining *Intention to Leave*. *Interpersonal Justice* ($t = -2.537, p = .012, \beta = -.207$), was the most important predictor in the model. It had a significant inverse relationship with *Intention to Leave*. Higher perceptions of *Interpersonal Justice* ($\beta = -.207$) resulted in lower employee *Intention to Leave* the organization.

Procedural Justice ($t = -2.165, p = .032, \beta = -.177$), was the second most important predictor in the model. It also had an inverse relationship with *Intention to Leave*. Higher perceptions of *Procedural Justice* ($\beta = -.177$) resulted in lower *Intention to Leave*. According to the findings, Hypothesis 2 was partially supported. *Interpersonal Justice* and *Procedural Justice* were not significant explanatory variables of *Intention to Leave*. The explanatory model explained a range of 10.9% to 11.8% of the variation in *Intention to Leave*. The results of the regression analysis for H2 are summarized in Table 4-71.

Table 4-71

Hierarchical (Forward) Multiple Regression Analysis of Organizational Justice and Intention to Leave

Variable	<i>F</i>	<i>df</i>	<i>p</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>Adjusted R</i> ²
Model 1	22.045	1	.000						.098	.093
(Constant)				18.438	1.297					
Interpersonal Justice Subscale				-.379	.081	-.312	-4.695	.000		
Model 2										
(Constant)	13.566	2	.000	19.532	1.381				.118	.109
Interpersonal Justice Subscale				-.252	.099	-.207	-2.537	.012		
Procedural Justice Subscale				-.142	.066	-.177	-2.165	.032		

Research Hypothesis 3

H3: Workplace aggression behaviors (passive-active, verbal-physical, direct-indirect) are significant positive explanatory variables of intention to leave.

To test Hypothesis 3, Pearson *r* correlations and multiple regression analyses using the hierarchical (forward) method were conducted to determine whether there was a significant positive explanatory (correlational) relationship between workplace aggression behaviors (passive, active, verbal, physical, direct, and indirect), and the dependent variable, *Intention to Leave*. The six subscales of the *60-Workplace Aggression Research Questionnaire (WAR-Q)* and the *5-Item Turnover Intention* scale resulting from EFA were utilized.

First, Pearson *r* correlation analyses were conducted to determine the order in which to enter the independent variables into the regression model. Pearson *r* correlations showed a significant positive correlation between six subscales of the *60-Item Workplace Aggression Research Questionnaire* and the *5-Item Turnover Intention* scale. The results are as follows: *passive* ($r = .264, p = .000$), *verbal* ($r = .249, p =$

.000), *indirect* ($r = .230, p = .001$), *active* ($r = .159, p = .011$), *direct* ($r = .156, p = .013$), and *physical aggression* ($r = .121, p = .036$). The results of Pearson r correlation between the *60-Item Workplace Aggression Research Questionnaire (WAR-Q)* and the *5-Item Turnover Intention* scale are presented in Table 4-72.

Table 4-72

Pearson r Correlation Between the 60-Item Workplace Aggression Research Questionnaire (WAR-Q) and the 5-Item Turnover Intention Scale

Variables	Pearson r	p -value
5-Item Turnover Intention Scale		
Passive Aggression	.264	.000
Verbal Aggression	.249	.000
Indirect Aggression	.230	.000
Active Aggression	.159	.011
Direct Aggression	.156	.013
Physical Aggression	.121	.036

Six significant positive explanatory variables (passive, verbal, indirect, active, physical, and direct) aggression were entered into a hierarchical forward linear regression model from the strongest Pearson r correlation to the weakest. Collinearity statistics were examined. The VIF is a predictor of strong linear relationships with other predictors and may be a concern if over 10, while tolerance should be greater than .10 (Field, 2005). For the one model produced, the Variance Inflation Factor (VIF) was 1.000, while the tolerance was 1.000. These results were well within the guidelines, suggesting multicollinearity was not a problem.

One model was produced from the hierarchical regression. The model was significant for an explanatory relationship ($p = .000$). The R^2 was 7.3% and the adjusted R^2 was of 6.9%, indicating that *passive aggression* accounts for 6.9% to 7.3% of the variation in *Intention to Leave*. The explanatory model found was:

$$\text{Intention to leave} = 9.759 (\text{constant}) + .086 (\text{passive aggression}) + e$$

Analysis of the sole predictor in the model indicated that *Passive aggression* ($t = 3.851, p = .000, \beta = .271$) had a positive relationship with *Intention to Leave*. Employees who experienced higher *Passive aggression* behaviors resulted in greater propensity of *Intention to Leave* the job. According to the findings, Hypothesis 3 was partially supported. *Passive aggression* behaviors were found to be a significant positive explanatory variable of *Intention to Leave*. The explanatory model explained a range of 6.9% to 7.3% of the variation in *Intention to Leave*. The hierarchical (forward) multiple regression results for H3 are presented in Table 4-73.

Table 4-73

Hierarchical (Forward) Multiple Regression Analysis of Workplace Aggression Behaviors and Intention to Leave

Variable	<i>F</i>	<i>df</i>	<i>p</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>Adjusted R</i> ²
Model 1	14.833	1	.000						.073	.069
(Constant)				9.759	.805					
Passive Aggression Subscale				.086	.022	.271	3.851	.000		

Research Hypothesis 4

H4: Employee demographic characteristics, work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), and workplace aggression behaviors (passive, active, verbal, physical, direct, indirect), are significant explanatory variables of intention to leave.

To test Hypothesis 4, *eta (h)* correlation analysis, Pearson *r* correlations and multiple regression analyses using the hierarchical (forward) method were used. Hypothesis 4 examined whether there was a significant explanatory (correlational) relationship between employee demographic characteristics, work profiles, perceptions of

organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), workplace aggression behaviors (passive, active, verbal, physical, direct, and indirect), and the dependent variable, *Intention to Leave*. *Employee Demographic Characteristics, Work Profiles*, the 20-Item Organizational Justice scale, the six subscales of the 60-Item Workplace Aggression Research Questionnaire (WAR-Q) and the 5-Item Turnover Intention scale resulting from EFA were utilized.

Eta correlation analyses were used to determine the correlation between categorical variables of employee demographics, work profiles, with the continuous or dependent variable, *Intention to Leave*. Categorical variables of *gender, race, and ethnicity* showed no significant *eta* correlations with the *Turnover Intention* scale, and thus, those variables were not included in the Pearson *r* or regression analyses. The results of *eta* correlations using the means procedure in SPSS are shown in Table 4-74.

Table 4-74

Eta Correlations of Employee Demographics, Work Profiles, and Intention to Leave

Categorical Variables	Eta (<i>h</i>)	Eta Squared (<i>h</i> ²)	<i>F</i>	<i>p</i>
Employee Demographics				
Age	.260	.067	3.266	.007
Gender	.045	.002	.467	.495
Race	.116	.013	.773	.544
Ethnicity	.027	.001	.168	.682
Highest Level of Education	.022	.000	.054	.947
Employee Work Profiles				
Seniority	.237	.056	2.231	.041
Job Category	.090	.008	1.866	.173
Number of Employees Supervised	.056	.003	.242	.867
Supervisory Level	.149	.022	1.290	.275
Number of Employees at Work Location	.063	.004	.305	.822
Telecommunications Sector	.208	.043	3.453	.017

Following the results from *eta* correlations, four dummy variables were created for *Telecommunications Sector; Wireline, Wireless, Cable, and Satellite*. These dummy

variables were included in the Pearson r correlation analyses. Pearson r correlations resulted in a significant inverse correlation with four subscales from the *20-Item Organizational Justice* scale, and the *5-Item Turnover Intention* scale. The results are as follows: *Interpersonal Justice* ($r = -.316, p = .000$), *Procedural Justice* ($r = -.312, p = .000$), *Distributive Justice* ($r = -.308, p = .000$), and *Informational Justice* ($r = -.296, p = .000$). Furthermore, *Seniority* ($r = -.139, p = .017$) and *Supervisory Level* ($r = -.121, p = .032$) also resulted in a significant inverse correlation with the *5-Item Turnover Intention* scale. Six subscales of the *60-Item Workplace Aggression Research Questionnaire* had a significant positive relationship with the *5-Item Turnover Intention* scale. Pearson r results for the six positive *WAR-Q* variables were: *passive* ($r = .264, p = .000$), *verbal* ($r = .249, p = .000$), *indirect* ($r = .230, p = .001$), *active* ($r = .159, p = .011$), *direct* ($r = .156, p = .013$), and *physical aggression* ($r = .121, p = .036$).

The dummy variable, *Satellite Telecommunications* ($r = .176, p = .004$), also had a significant positive relationship with the *Turnover Intention* scale. The results of Pearson r correlation among *Employee Demographic Characteristics*, *Work Profiles*, the *20-Item Organizational Justice* scale, the *60-Item Workplace Aggression Research Questionnaire (WAR-Q)*, and the *5-Item Turnover Intention* scale are presented in Table 4-75.

Table 4-75

Pearson r Correlation among Employee Demographic Characteristics, Work Profiles, the 20-Item Organizational Justice Scale, the 60-Item Workplace Aggression Research Questionnaire (WAR-Q), and the 5-Item Turnover Intention Scale

Variables	Pearson <i>r</i>	<i>p</i> -value
5-Item Turnover Intention Scale		
Interpersonal Justice	-.316	.000
Procedural Justice	-.312	.000
Distributive Justice	-.308	.000
Informational Justice	-.296	.000
Passive Aggression	.264	.000
Verbal Aggression	.249	.000
Indirect Aggression	.230	.000
Active Aggression	.159	.011
Direct Aggression	.156	.013
Seniority	-.139	.017
Supervisory Level	-.121	.032
Physical Aggression	.121	.036
Satellite Sector	.176	.004
Age	-.075	.127
Number of Employees at Work Location	.063	.171
Number of Employees Supervised	-.031	.321
Education	.000	.498

Four significant inverse Pearson *r* variables from the *Organizational Justice* scale (interpersonal, procedural, distributive, and informational justice), six significant explanatory variables (passive, active, verbal, physical, direct, and indirect) aggression behaviors from the *WAR-Q*, were entered into a hierarchical forward linear regression model. *Satellite*, *Seniority*, and *Supervisory Level* were also entered into the regression model. Altogether there were 13 predictors entered into the model. The variables were arranged based on the order of significance, and if same significance, then with the strongest Pearson *r* correlations to the weakest. Collinearity statistics were examined. The VIF is a predictor of strong linear relationships with other predictors and may be a concern if over 10, while tolerance should be greater than .10 (Field, 2005). For the three models produced, the Variance Inflation Factor (VIF) ranged from 1.000 to 1.289, while

the tolerance ranged from .776 to 1.000. These results were well within the guidelines, suggesting multicollinearity was not a problem.

Three different models were produced from the hierarchical regression. Each model had significant F values. Model 1 had significant F values ($p = .000$) which is the significance of the regression model as a whole. Model 2 ($F = 9.220, p = .000$), and Model 3 ($p = .000$), also had significant F values. The *Adjusted R*² increased steadily from Model 1 (7.2%), to Model 2 (8.9%), to Model 3 (11.3%). Model 3 ($R^2 = 12.8%$) had three explanatory variables: *Distributive Justice*, *Informational Justice*, and *Satellite Telecommunications*. Model 3 was selected as the best explanatory model to explain *Intention to Leave*. The explanatory model found was:

$$\begin{aligned} \text{Intention to Leave} = & 18.652 \text{ (constant)} - .232 \text{ (Distributive Justice)} - .173 \\ & \text{(Informational Justice)} + 2.836 \text{ (Satellite)} + e \end{aligned}$$

Analysis of individual predictors in Model 3 indicated three significant explanatory relationships between three predictors and *Intention to Leave*. The standardized beta coefficient (β) for each of the three predictors indicated its relative importance in explaining *Intention to Leave*. *Distributive Justice* was the most important predictor ($t = -2.402, p = .017, \beta = -.198$) in the model. The negative β value of *Distributive Justice* had a significant explanatory relationship on *Intention to Leave*. The lower employees' perceptions of *Distributive Justice*, the higher were employees' propensity for *Intention to Leave* their job.

Satellite Telecommunications was the second most important predictor ($t = 2.347, p = .020, \beta = .170$) in the model. It had a positive relationship with *Intention to Leave*. The positive β value of *Satellite Telecommunications* indicated that employees

working in the *Satellite Telecommunications* sectors were positively related to a greater *Intention to Leave* than any other telecom industry sector.

Lastly, *Informational Justice* ($t = -1.946, p = .053, \beta = -.160$), was the third most important predictor in the model. It had an inverse relationship with *Intention to Leave*, whereby lower *Informational Justice* scores were associated with higher *Intention to Leave*. According to the findings, Hypothesis 4 was partially supported. *Distributive Justice*, *Satellite Telecommunications*, and *Informational Justice* were significant explanatory variables of *Intention to Leave*. The explanatory model explained a range of 11.3% to 12.8% of the variation in *Intention to Leave*. The hierarchical (forward) multiple regression results for H4 are summarized in Table 4-76.

Table 4-76

Hierarchical (Forward) Multiple Regression Analysis of Employee Demographic Characteristics, Work Profiles, Organizational Justice, Workplace Aggression Behaviors, and Intention to Leave

Variable	F	df	p	B	SE	β	t	p	R ²	Adjusted R ²
Model 1	14.17	1	.00						.078	.072
(Constant)				17.20	1.256					
Distributive Justice				-.33	-.087	-.279	-3.76	.000		
Model 2	9.22	2	.00						.099	.089
(Constant)				19.07	1.555					
Distributive Justice				-.24	.098	-.200	-2.40	.017		
Informational Justice				-.18	.090	-.167	-2.00	.047		
Model 3	8.15	3	.00						.128	.113
(Constant)				18.65	1.545					
Distributive Justice				-.23	.097	-.198	-2.40	.017		
Informational Justice				-.17	.089	-.160	-1.95	.053		
Satellite Sector				2.84	1.208	.170	2.35	.020		

Chapter IV presented a description of the final data producing sample, the psychometric analyses of the *Organizational Justice* scale, *Workplace Aggression Research Questionnaire (WAR-Q)*, and the *Turnover Intention* scale. Results of answering the research questions and hypotheses testing are also presented. All data analyses were rechecked and verified for accuracy. Chapter V presents a summary and discusses the interpretations of findings, limitations, conclusions, practical implications, and recommendations for future studies on workplace aggression behaviors, organizational justice and intention to leave.

CHAPTER V

DISCUSSION

Chapter V presents a discussion of the results. The study examined the relationships among workplace aggression behaviors, organizational justice, and intention to leave among U.S. telecommunications workers. Many studies have been conducted to analyze the effects of workplace aggression behaviors and intention to leave. However, this was the first study to explain a relationship among U.S. telecommunications employees' demographics, work profiles, workplace aggression behaviors, perceptions of organizational justice, and intention to leave. Chapter V presents a summary and interpretations of the findings followed by the practical implications, conclusions, limitations, and recommendations for future study.

Summary and Interpretations

Data Producing Sample and the Target Population of U.S. Telecom Workers

The data collection process was performed by the researcher's contract agreement with Zoomerang Market Tools to provide a response rate of 275 completed e-mail surveys. A total of 1,654 surveys were randomly sent by Zoomerang Market Tools to an accessible population of telecommunications employees located throughout the United States. Of the 242 completed surveys, 241 were usable, resulting in an effective response rate of 14.6%. The final data-producing sample closely represented the distribution of the telecommunications sectors of the target population and provided support for external validity of the study so that findings could be generalized across sectors.

Psychometric Evaluation of Measures

In this study, the *Organizational Justice* scale, measured variables of *procedural justice*, *distributive justice*, *interpersonal justice*, and *informational justice* (Colquitt, 2001). Twenty items assessed the four subscales using a 5-point frequency rating scale. Higher scores indicated increased perceptions of justice and equitable treatment, lower scores represented unjust and unfair treatment. The items in each subscale are as follows: *procedural justice*, 7 items, *distributive justice*, 4 items, *interpersonal justice*, 4 items, and *informational justice*, 5 items. First, varimax rotation was used to establish construct validity of the *Organizational Justice* scale. This resulted in 4 factors, *procedural justice* (7 items), *distributive justice* (4 items), *interpersonal justice* (4 items), and *informational justice* (5 items). Secondly, exploratory factor analysis (EFA) procedures were then performed on the *20-Item Organizational Justice* scale. Lastly, internal consistency reliability analysis was calculated by using Cronbach's alpha. The total scale of the overall Cronbach's Alpha reported was .945. Based on exploratory factor analysis there were four subscales of the *Organizational Justice* scale: a 7-item *procedural justice* subscale ($\alpha = .903$), a 4-item *distributive justice* subscale ($\alpha = .916$), a 4-item *interpersonal justice* subscale ($\alpha = .930$), and a 5-item *informational justice* subscale ($\alpha = .898$), resulting in a 20-item scale.

The internal consistency reliability in this study was consistent with two studies. Colquitt's (2001) field study of employees in a automobile parts manufacturing company reported Cronbach's alpha reliability from the four subscales as follows: *procedural justice* ($\alpha = .93$), *distributive justice* ($\alpha = .93$), *interpersonal justice* ($\alpha = .92$), and *informational justice* ($\alpha = .90$). Andersson-Straberg, Sverke, and Hellgren (2007)

examined perceptions of justice relating to pay setting among Swedish nurses using Colquitt's (2001) *Organizational Justice* scale. The alpha coefficients for Colquitt's scale reported by Andersson-Straberg et al. (2007) were as follows: *distributive justice*, ranging from .83 to .87; *procedural justice*, ranging from .63 to .82; *interpersonal justice*, ranging from .62 to .94; and *informational justice*, ranging from .79 to .88. With satisfactory factor and reliability analysis, the *20-Item Organizational Justice* scale was used to answer the research questions and test the hypotheses using regression analysis.

Workplace aggression behaviors were measured with Neuman and Keashly's (2004) *60-Item Workplace Aggression Research Questionnaire (WAR-Q)*. Six subscales of aggression, *passive*, *active*, *verbal*, *physical*, *direct*, and *indirect* behaviors were analyzed. All items of the *WAR-Q* were rated on a 7-point frequency rating scale. Higher scores indicated greater frequency of exposure to aggression behaviors. In this study, varimax rotation was used to establish construct validity of the *WAR-Q*. This resulted in 6 factors: *passive* (16 items), *active* (29 items), *verbal* (29 items), *physical* (13 items), *direct* (27 items), and *indirect* (13 items). Exploratory factor analysis (EFA) procedures were then conducted on the 60-item *WAR-Q*. Lastly, for the 60-item *WAR-Q*, the internal consistency reliability was calculated using Cronbach's alpha. The total scale of the overall Cronbach's Alpha reported was .976. Based on exploratory factor analysis there were six subscales of the *WAR-Q*: a 16-item *passive aggression* subscale ($\alpha = .925$), a 29-item *active aggression* subscale ($\alpha = .960$), a 29-item *verbal aggression* subscale ($\alpha = .967$), a 13-item *physical aggression* subscale ($\alpha = .910$), a 27-item *direct aggression* subscale ($\alpha = .958$), and a 13-item *indirect aggression* subscale ($\alpha = .910$), resulting in a 60-item scale. With satisfactory factor and reliability analysis, the *60-Item*

WAR-Q scale was used to answer research questions and test the hypotheses using regression analysis.

The internal consistency reliability in this study was consistent with two studies. Neuman and Keashly's (2004) three-year study with the U.S. Department of Veterans Affairs resulted in coefficient alpha as an estimate of internal consistency reliability for the total 60 item *WAR-Q* as .95. For the aggression behavior subscales reliabilities were as follows: *verbal* ($\alpha = .95$), *physical* ($\alpha = .82$), *active* ($\alpha = .94$), *passive* ($\alpha = .89$), *direct* ($\alpha = .94$), and *indirect* ($\alpha = .87$).

Harvey and Keashly's (2003) study among undergraduate Business Administration students utilized the *WAR-Q* to measure aggression. The researchers used 52 of the 60-item *WAR-Q* (Neuman & Keashly, 2003). The internal consistency reliability reported by the researchers for their sample was .89. Although the researchers did not report consistency reliability for the individual subscales, the overall coefficient alpha for the total scale was consistent with the findings of this study.

Intention to Leave was measured by the *Turnover Intention* scale, developed by Kim, Price, Mueller, and Watson (1996), and was adapted for this study. The original scale included four items which measured employees' intention to leave the organization. Respondents were requested to select a response from a five-point Likert scale. With permission from one of the authors, the researcher adapted the scale to add an additional item, TURINT5: *If perpetrator left, I would stay with the organization*. For the 5-item, *Turnover Intention* scale, the internal consistency reliability was calculated using Cronbach's alpha. For the total scale, the overall Cronbach's Alpha reported was .830. With satisfactory factor and reliability analysis, the modified 5-item *Turnover Intention*

scale was used to answer research questions and test the hypotheses using regression analysis. The internal consistency reliability in this study was consistent with Kim et al.'s (1996) study among physicians at a U.S. Air Force hospital. The researchers reported internal consistency reliability as .85 for their sample. A summary of the psychometric evaluation of measures are presented in Table 5-1.

Table 5-1

Summary of Psychometric Evaluation of Measures Using EFA and Coefficient Alpha

Scale	Reliability α	Validity			Analysis
		Construct Validity			
		<u>Exploratory Factor Analysis</u>			
		Factors	Loadings	Variance Explained	
20 Item Organizational Justice Scale (Total score range 20-100)	.945	4	.407 to .852	73.345%	Very good reliability. Construct validity confirmed multidimensional scale. Total scale and subscales used in comparative and regression analysis.
Factor 1: Procedural Justice 7 Items (Score range 7-35)	.903		.553 to .778		
Factor 2: Distributive Justice 4 Items (Score range 4-20)	.916		.639 to .848		
Factor 3: Interpersonal Justice 4 Items (Score range 4-20)	.930		.766 to .852		
Factor 4: Informational Justice 5 Items (Score range 5-25)	.898		.407 to .810		
60 Item WAR-Q (Total score range 60-420)	.976	6	.417 to .909	54.363%	Very good reliability. Construct validity confirmed multidimensional scale. Total scale and subscales used in comparative and regression analysis.

Table 5-1 Continued

Scale	Reliability α	Validity			Analysis
		Construct Validity			
		<u>Exploratory Factor Analysis</u>			
		Factors	Loadings	Variance Explained	
Factor 1: Passive Aggression 16 Items (Score range 16-112)	.925		.462 to .823		
Factor 2: Verbal Aggression 29 Items (Score range 29-203)	.967		.428 to .823		
Factor 3: Indirect Aggression 13 Items (Score range 13-91)	.910		.494 to .786		
Factor 4: Active Aggression 29 Items (Score range 29-203)	.960		.452 to .909		
Factor 5: Physical Aggression 13 Items (Score range 13-91)	.910		.440 to .909		
Factor 6: Direct Aggression 27 Items (Score range 27-189)	.958		.440 to .909		
Turnover Intention Scale 5 Items (Total score range 5-25)	.830	1	.641 to .897	75.418%	Very good reliability. Construct validity confirmed unidimensional scale. Total scale and subscales used in comparative and regression analysis.

Research Questions

Research Question 1 - Descriptive Analysis

Descriptive analysis of employee demographic characteristics. Employee demographic characteristics, developed by the researcher, asked respondents questions about age, gender, race, ethnicity, and highest level of education. Of the 241 participants,

the majority of the respondents were in the age category of *50 to 57 years old* (24.9%) and *42 to 49 years* (22.4%). The telecom employees who completed the survey were composed of 61.8% *male*, and 38.2% *females*. Overwhelmingly, *whites* accounted for 89.6% of the sample within the race category, while 6.6% represented *Hispanic or Latino* in the ethnicity group. *Black or African American* employees represented 5.4%, and *Asian* employees represented 2.9% of the sample. Three respondents replied to *Race Other* and wrote in *Hispanic* (1.3%). One respondent wrote in “Hispanic Mixed” which represented 0.4%. The sample was overwhelmingly *Not Hispanic or Latino* (93.4%). The majority of the respondents (62.2%) had a *College* education, although 27.0% of the employees had an educational level limited to *High School*.

This study’s *male* gender sample of 61.8% was much more closely matched with Loi, Hang-yue, and Foley’s (2006) research that examined law firm attorneys’ organizational justice and intention to leave. Loi et al.’s (2006) study found that *males* represented 55.4% of the sample. Findings in terms of age, race, ethnicity, and highest level of education were not consistent with the literature reviewed.

Descriptive analysis of employee work profiles. Employee work profile characteristics, developed by the researcher, asked respondents questions about seniority, job category (management or non-management), number of employees supervised (if management), supervisory level, number of employees at work location, and telecom sector (wireline, wireless, cable, or satellite telecommunications). The majority of the telecom employees had between *2 to 5 years* seniority (26.1%). The telecom employees who completed the survey were composed of 67.2% *Non-management* and 32.8% *management*. In terms of *number of employees supervised*, the majority of management

employees supervised *1 to 15 employees* (14.5%). In the *supervisory level* category, *Team Leaders* accounted for 14.1%, followed by 13.3% of *Managers* (those who oversee first line supervisors), 7.5% for *First Line Supervisors*, and 2.5% for *Executive (VP Level and Higher)*. The majority of employees responding worked in locations of *250 or more employees* representing 40.7% of the sample, followed by 33% for telecom employees who worked in locations of *50 to 249 employees*. *Wireline* employees represented 49.4%, *wireless* 25.3%, *cable and other program distributors* 17.4%, and *satellite telecommunications* workers represented 7.9% of the total telecommunications sector.

This study's *seniority level* (2 to 5 years), was closely consistent with Loi, Hangyue, and Foley's (2006) study that examined law firm attorneys' organizational justice and intention to leave. Loi et al.'s (2006) study found that the law firm attorney's average seniority was 6.1 years. Employees who worked in locations of *250 or more employees* represented 40.7% of the sample. However, combined with the employees who worked in locations of *50 to 249 employees* (33%), results were strongly consistent with the U.S. Department of Labor, Bureau of Labor Statistics (2008b) target population of 70% of workers in locations of *50 to 249 employees* ($40.7\% + 33\% = 73.7\%$).

Findings in terms of telecommunications sector were closely consistent with the U.S. Department of Labor, Bureau of Labor Statistics (2008b) target population. The sample telecom sector responses were as follows: 49% *wireline*, 21% *wireless*, and 15% *cable*. *Satellite* telecommunications represented 7.9% of the sample. *Satellite* telecommunications were not consistent with the target population as identified by the U.S. Department of Labor, Bureau of Labor Statistics (2008b) as 15%. Job category

(management or non-management), number of employees supervised, and supervisory level were not consistent with the literature reviewed.

Descriptive analysis of perceptions of organizational justice. Telecom employees' perceptions of organizational justice were assessed by the four subscales of the *Organizational Justice* scale. After exploratory factor analysis, the *Organizational Justice* scale resulted in a 20-item measurement. All 20-items were rated on a 5-point frequency rating from 1 to 5. Higher scores are interpreted as increased perceptions of justice and equitable treatment. Four subscales of organizational justice, *procedural justice*, *distributive justice*, *interpersonal justice*, and *informational justice* were analyzed. The total mean score for the 20-item *Organizational Justice* scale was 68.38 with a possible score range of 20-100. The average item mean scores for the total scale were slightly more than 3 (3.42).

The highest average item mean score for the subscales was the *interpersonal justice* subscale resulting in 3.84, which had an average total subscale score of 15.37 out of a possible range of 4-20. Findings were consistent with Andersson-Straberg et al.'s (2007) study which evaluated perceptions of pay justice with Swedish nurses. Colquitt's (2001) *Organizational Justice* scale was also used for the analysis. Andersson-Straberg et al. (2007) found that higher *interpersonal justice* scores were related to promoting higher job satisfaction and lower intention to leave. *Procedural Justice* had the lowest mean subscale score of 3.07, which had an average total score of 21.51 with a possible score range of 7-35. Findings were closely consistent with Loi, Hang-yue, and Foley's (2006) study which examined the relationships among law firm attorneys' organizational justice perceptions, perceived organizational support (POS), organizational commitment,

and intention to leave. The researchers observed two major types of organizational justice perceptions: *distributive justice* and *procedural justice*. Mean scores for *Procedural Justice* in Loi et al.'s (2006) study was 3.47. Average scores for the other subscales were: *distributive justice* 13.82 (score range 4-20) with an average item mean score of 3.46 and *informational justice* 17.36 (score range 5-25) with an average item mean score of 3.47. Mean scores for *distributive justice* were also closely consistent with Loi et al.'s (2006) study of 3.89.

Descriptive analysis of perceptions of frequency of aggression behaviors.

Frequency of workplace aggression behaviors were measured by the six subscales of the *Workplace Aggression Research Questionnaire (WAR-Q)*. After exploratory factor analysis, the WAR-Q resulted in a 60-item measurement. All 60-items were rated on a 7-point frequency rating scale from 1 to 7 with higher scores representing greater frequency of exposure to aggression behaviors. Six subscales of aggression, *passive*, *active*, *verbal*, *physical*, *direct*, and *indirect* behaviors were analyzed. Each item within the WAR-Q analyzed more than one subscale. For example, item WARQ14 "Been subjected to obscene or hostile gestures" measured *active*, *physical*, and *direct* aggression behaviors. The total mean score for the 60-item WAR-Q was 100.63 with a possible score range of 60-420. The average item mean scores for the total scale were slightly more than 1 (1.68).

The highest average item mean score was 2.01 for the *passive aggression* subscale which had an average total subscale score of 32.09 out of a possible range of 16-112. The lowest average item mean score was 1.26 for the *physical aggression* subscale with an average total subscale score of 16.33 out of a score range 13-91. The other

subscale mean scores were: *verbal aggression* which resulted in an average item mean score of 1.91, and an average total subscale score of 55.28 (score range 29-203), *indirect aggression* with an average item mean score of 1.87 and an average total subscale score of 24.27 (score range 13-91), *active aggression* with an average item mean score of 1.32 with an average total subscale score of 38.25 (score range 29-203), and *direct aggression* with an average item mean score of 1.30, and an average total subscale score of 35.03 (score range 27-189).

Baron and Neuman (1996) and Neuman (2003) did find that aggression in work environments was more *verbal* than *physical*, more *passive* than *active*, and more *direct* than *indirect*. Findings were closely consistent with Baron and Neuman's (1996) and Neuman's (2003) research with the exception of *passive* and *active* aggression results which were reversed. Although *passive aggression* is considered to be covert, it was found to be more frequent than *active aggression*, however, Baron and Neuman (1996) and Neuman (2003) suggested that in general, covert aggression is much more prevalent than overt aggression.

Of the telecommunications workers sampled for this study, 1 in 5 employees or 21% reported frequent experiences with *workplace aggression behaviors*. Findings were inconsistent with Matthiesen and Einarsen (2007) and Namie and Namie (2000) research that revealed that approximately one in ten individuals were victims of workplace bullying. To constitute bullying, aggressive episodes must occur frequently, at least weekly or more. Most researchers disregard one-time episodes of aggression as bullying incidents (Einarsen, et al., 2003; Leymann, 1990; Rayner, Hoel, & Cooper, 2002; Salin, 2003). According to Namie and Namie (2000), "bullying encompasses all types of

mistreatment at work. All harassment is bullying as long as the actions have the effect, intended or not, of hurting the target” (p. 3).

Descriptive analysis of intention to leave. The *Turnover Intention* scale included five items which measured employees’ intention to leave the organization. Respondents were requested to select a response from a five-point Likert scale from 1 to 5 (higher scores indicated increased propensity of quitting the job). The lowest average *Turnover Intention* score was item TURINT1, “I plan to leave the organization as soon as possible,” at 2.21. The highest average *Turnover Intention* score was item TURINT2, “Under no circumstance will I voluntarily leave the organization.” at 2.85. Average scores for the *Turnover Intention* scale ranged from 2.21 to 2.85. The average item mean score for the *Turnover Intention* scale was 2.49 and the total scale mean score was 12.44 out of a score range of 5-25. Findings were consistent with Mobley’s (1977) theory that when an employee experiences dissatisfaction on the job, thoughts of quitting and intention to leave “may be the last step prior to actual quitting” (p. 237).

Research Question 2 – Comparisons of Work Profiles According to Differences in Employee Demographic Characteristics

Research Question 2 examined the differences in telecommunications employees’ work profiles of *seniority, job category, number of employees supervised, supervisory level, number of employees at work location, and telecom sector*. Perceptions of organizational justice, *procedural justice, distributive justice, interpersonal justice, and informational justice*, workplace aggression behaviors *passive-active, verbal-physical, direct-indirect*, and *intention to leave* according to employee demographic characteristics (age, gender, race, ethnicity, and highest level of education) were also examined. For

comparison of work profiles, the *20-Item Organizational Justice* scale, the *60-item Workplace Aggression Research Questionnaire (WAR-Q)*, and the *5-Item Turnover Intention* scale according to employee demographic characteristics, multiple ANOVA, Independent *t*-tests and Chi-square analysis were performed.

Differences in work profiles according to age. *Seniority* was highest for employees in the *50 to 57* age group ($M = 4.87$) than for almost all the other age categories ($p = .000$). Both *Non-Management* employees (16.2%), and *Management* employees (8.7%) were significantly highest in the *50 to 57* age group ($p = .007$). The majority of younger employees in the *18 to 25* age group ($M = 3.50$) worked in locations with the most coworkers. Younger employees may typically work in entry-level positions in large customer service call centers or information operator services with numerous groups of other employees. Though not significant, employees in the *26 to 33* age group reported higher experiences with *verbal, physical, active, passive, direct, indirect, and total score workplace aggression behaviors* than any other age group.

Intention to Leave was significantly highest for employees aged *18 to 25* ($p = .007$), followed by employees in the *50 to 57* age group ($p = .004$). Findings were consistent with Keashly, Trott and MacLean (1994), whose research found that younger employees with low seniority are typically at the bottom of the workplace hierarchy and may be a higher risk for being targeted by bullying behaviors, resulting in leaving their jobs. In addition, employees aged *50 to 57* are considered “mid-career” and are typically more experienced and educated and may have more talent to enhance job mobility than other age groups. Although retirement may be an option for senior employees to leave their companies, many times it is not economically feasible. In a turbulent financial

economy where personal investments are low, employees may be forced to postpone retirement. Findings in this study also supported Price's (2001) research that if new job opportunities found elsewhere do not appear to be better than those with the present employer, the employee will have fewer reasons to consider leaving.

Differences in work profiles according to gender. There were more *Male Non-Management* (38.6%) and *Management* employees (23.2%) than *Female Non-Management* (28.6%) and *Management* (9.5%) employees. There was a significant difference in *Supervisory Level* ($p = .004$), between *Males* and *Females*. *Males* tended to be in higher levels of supervision than *Female* employees. *Females* reported a significant higher *Number of Employees at Work Location* than *Males* ($p = .000$).

Males reported significantly higher perceptions of *Organizational Justice* (total scale) than *Female* employees ($p = .035$). *Males* also had higher perceptions of *Procedural Justice* than *Female* employees ($p = .002$). Although *Distributive Justice* was not significant ($p = .068$), *Males* had higher mean scores ($M = 14.19$) than *Females* ($M = 13.21$). Findings were inconsistent with Andersson-Straberg et al.'s (2007) study that examined pay justice among Swedish nurses using Colquitt's (2001) *Organizational Justice* scale. In Andersson-Straberg et al.'s (2007) research, *Distributive Justice* scores were higher for women than men. There were no significant differences in perceptions of *Interpersonal Justice* and *Informational Justice* according to *Gender*.

Although not significant, *Males* reported greater experiences with *passive, active, verbal, physical, direct, and indirect aggression behaviors* than *Females*. Findings were consistent with Zapf and Einarsen's (2003) study: "Bullying research has revealed that bullies seem to be *male* more often than *female*, and supervisors and managers more

often than colleagues” (p. 168). However, Djurkovic, et al. (2004) found that victims of *female* bullies were likely to be *female* and victims of *male* bullies were *male*. Respondents were not requested to identify the perpetrator’s demographic or workplace position within the organization such as *Superior, Co-worker, Subordinate, Customer, or Other*, which was a limitation to this research study. This information may be useful in analyzing the root cause of *workplace aggression*.

Differences in work profiles according to race. Although not significant ($p = .077$), *Whites* were overwhelmingly higher than any other *Race* among *Non-Management* (62.2%) and *Management* (27.7%) telecommunications workers. There was a significant effect of *Race* on the *Number of Employees Supervised* ($p = .000$). Minorities did not respond unless they were in a supervisory or management position. *Whites* responded regardless of level (*Non-Management* or *Management*). The *American Indian or Alaska Native Race* ($M = 4.00$) reported supervising more employees than the *Asian* group ($M = 2.29$), the *Black or African American* group ($M = 2.08$), the *White* group ($M = 1.34$), and the *Other Race* group ($M = 1.25$). The *American Indian or Alaska Native* group ($M = 4.00$) held higher supervisory positions (Executive VP Level and Higher) than any other *Race* group.

Although findings were not significant, *Black or African Americans* reported higher *verbal, physical, active, and direct aggression* mean score results, while *Asians* reported higher *passive and indirect aggression* results which suggest racial and possibly cultural differences in aggression or perceptions of *workplace aggression behaviors*. These findings were consistent with Neuman and Baron’s (1998) research that found “the greater the increase in diversity in their workplaces reported by individuals, the greater

the *workplace aggression* they reported witnessing and experiencing” (p. 403). Diversity in the workplace may influence the choice of targets who may also be victims of prejudice. Minorities or outside groups may be considered weak or unlikely to retaliate when aggressive behaviors are received.

Differences in work profiles according to ethnicity. *Hispanic or Latino* employees had significantly higher perceptions of *Organizational Justice total scale* ($p = .022$) than *Not Hispanic or Latino* workers. Since there was no previous literature found that examined *Organizational Justice* among *Hispanic or Latino* employees using Colquitt’s (2001) *Organizational Justice* scale, interpretations according to the literature reviewed cannot be made. As a cultural difference, *Hispanic or Latino* employees may have different sensitivities to equity in the workplace as far as evaluating fairness than *Not Hispanic or Latino* workers.

Although not significant, *Hispanic or Latino* employees experienced greater *physical aggression behaviors* ($p = .928$) and also greater *direct aggression behaviors* ($p = .702$) than *Not Hispanic or Latino* employees. Findings were consistent with Tajfel and Turner’s (1979) research with social identity theory which suggests that people tend to classify themselves and others according to demographic characteristics such as race, culture, and ethnicity. Being different may lead to misdirected aggression toward the individual who is viewed as an outsider and not part of the group. Neuman and Baron’s (1998) research found that with increased diversity also followed increased *workplace aggression behaviors*. *Intention to Leave* was also higher for *Hispanic or Latino* employees, though the findings were not significant ($p = .682$). *Intention to Leave* may

have been exacerbated due to *Hispanic or Latino* employees experiencing greater *physical* and *direct aggression* behaviors than other employees.

Differences in work profiles according to highest level of education. Both *Non-Management* employees (42.3%) and *Management* employees (19.9%) results were significantly higher in the *College* group than the rest of the sample ($p = .009$). *Supervisory Level* was significantly higher ($p = .023$) for employees who attended *Graduate School*, than the *College* and *High School* levels, which indicates that many management employees are more highly educated. Although not significant ($p = .387$), more employees attended *College* among all the sectors (wireline, wireless, cable, and satellite) than *High School* or *Graduate School*. Findings for perceptions of *Organizational Justice* (total scale) were also higher for those employees who attended *College* than *High School* or *Graduate School*, though these results were not significant ($p = .466$). Employees whose education was limited to *High School* reported greater experiences with *verbal*, *physical*, *active*, and *direct aggression behaviors* than the other educational levels, although these differences were not significant ($p = < .05$). Additionally, employees who were *Graduate School* educated reported greater experiences with *passive* and *indirect aggression behaviors*, however, these differences were not significant. The literature reviewed did not examine *Highest Level of Education* and the variables analyzed in this study.

Research Question 3 – Comparisons of Demographic Characteristics According to Differences in Employee Work Profiles

Research Question 3 examined the differences in telecommunications employees' demographic characteristics of *age*, *gender*, *race*, *ethnicity*, and *highest level of*

education. Perceptions of organizational justice, *procedural justice*, *distributive justice*, *interpersonal justice*, and *informational justice*, workplace aggression behaviors *passive-active*, *verbal-physical*, *direct-indirect*, and *intention to leave* according to employee work profiles (seniority, job category, number of employees supervised, supervisory level, number of employees at work location, and telecom sector) were also examined. For comparison of employee demographics, the *20-Item Organizational Justice* scale, the *60-item Workplace Aggression Research Questionnaire (WAR-Q)*, and the *5-Item Turnover Intention* scale according to employee work profiles, multiple ANOVA, Independent *t*-tests, and Chi-square analysis were performed.

Differences in demographic characteristics according to seniority. As expected, *Age* was significantly higher for employees with *Seniority* of *Over 31 years*, than for almost all the groups ($p = < .05$). *Intention to Leave* was significantly higher for employees in the *Less than one year* category ($p = .041$) than it was for any other *Seniority* group. Findings were consistent with Keashly, Trott and MacLean (1994), whose research indicated that young employees with low seniority are typically at the bottom of the workplace hierarchy and may be a high risk for being targeted by bullying behaviors, resulting in leaving their jobs.

Differences in demographic characteristics according to job category. Mean results for *Management* employees were 4.29 which represented *Age* of *Management* workers to be between *49 to 57 years* of age. *Non-Management* employees mean scores were 3.64 which represented their *Age* to be between *41 to 49 years* of age. There were more *Males* in both *Non-management* (38.6%) and *Management* (23.2%) than *Females*. Only 9.5% of *Females* were *Management* workers. Although not significant, *White*

employees were overwhelmingly higher than any other *Race* according to *Non-Management* (62.2%) and *Management* (27.7%) employees. There was a significant difference in *Highest Level of Education* ($p = .009$) between *Non-Management* or *Management* employees. Results found that 42.3% of *Non-Management* employees had a *College* education, and 6.2% of *Management* employees had a *Graduate School* education.

Management employees reported significantly higher perceptions of *Organizational Justice* (total scale) than *Non-Management* employees ($p = .007$). *Procedural Justice* results were significantly higher ($p = .000$) for *Management* employees than *Non-Management* employees. Findings suggest that with higher perceptions of *Procedural Justice*, *Management* employees perceived that new organizational policies and procedures were equitable and fair. Although not significant, perceptions of *Distributive Justice* ($p = .071$) mean scores were also higher for *Management* employees ($M = 14.49$) than *Non-Management* ($M = 13.49$) workers, which suggests that *Management* employees perceive that rewards compared to efforts invested were also equitable and fair (Leventhal, 1980). In addition, perceptions of *Interpersonal Justice* ($M = 15.95$) and *Informational Justice* ($M = 17.46$) results were higher by *Management* employees, though results were not significant ($p = < .05$).

Although perceptions of *Organizational Justice* were higher for *Management* employees, *Management* also reported higher experiences with *active, passive, verbal, physical, direct, and indirect aggression behaviors* than *Non-Management* employees, however, these results were not significant ($p = < .05$). Findings were consistent with Harvey et al.'s (2006) research with victims whose characteristics were different from the

typical provocative or submissive targeted employee. Managers or executives who are equally in strong positions may be in competition for power or control within their organizations. Harvey et al. (2006) referred to this competitive relationship as an “elephant fight or the battle of the giants” (p. 7) that occurs when two powerful opponents battle for control over the workplace. The victim is the loser of the fight, and will be continuously bullied by the opponent if the loser chooses to stay with the organization. The constructs in this study did not identify the aggressor, which may also be subordinate employees, customers, or other managers, as well as upper management.

Non-Management employees reported higher *Intention to Leave* than *Management* employees, though findings were not significant ($p = .173$). Since *Management* employees reported greater experiences with *workplace aggression behaviors*, findings were consistent with Tepper et al. (2006) who found that supervisors who were treated unfairly (aggressively), expressed their anger by abusing their employees. As a result, *Intention to Leave* was higher for *Non-Management* workers.

Differences in demographic characteristics according to number of employees supervised. *Age* was significantly higher for *Managers* who oversee the *1 to 15 Employees Supervised* category ($M = 4.29$), than for almost all the groups ($p = .026$), which suggests that older employees work in smaller work groups. There were no significant differences between *Number of Employees Supervised* and *Gender* ($p = .064$), however *Males* dominated the *0 Employees Supervised* group (42.3%), while *Females* represented 31.5%. *White* employees were significantly higher for employees in the *0 Employees Supervised* group (69.7%) than any other *Race* according to *Number of Employees Supervised*.

Organizational Justice (total scale) was significantly higher for employees in the *16 to 50 Number of Employees Supervised* group ($M = 78.19$), than for almost all the groups ($p = .000$). *Procedural Justice* ($p = .000$) and *Interpersonal Justice* ($p = .042$) were also significantly higher for employees in the *16 to 50 Number of Employees Supervised* group ($M = 25.94$) and ($M = 17.00$) respectively. Findings suggest that managers who oversee *16 to 50 employees* perceived that new organizational policies and procedures were equitable and fair and interactions with others were polite and respectful.

Findings were also significant ($p = .004$) for employees who managed workers in the *Over 51 Number of Employees Supervised* group ($M = 57.80$) who reported the lowest perceptions of *Organizational Justice* (total scale). In addition, this group also reported the lowest perceptions of *Procedural Justice* ($M = 18.10$) and *Interpersonal Justice* ($M = 12.70$), suggesting unfair treatment with policies and poor interactions with others in this group. Although there was not a significant effect of *Number of Employees Supervised* on *Informational Justice* ($p = .122$) and *Distributive Justice* ($p = .068$), the *Over 51 Number of Employees Supervised* group reported the lowest perceptions of *Informational* ($M = 15.60$) and *Distributive Justice* ($M = 11.40$), which also suggests unfair treatment caused by poor management in that group.

Physical workplace aggression was significantly higher for employees in the *16 to 50 Number of Employees Supervised* group ($M = 20.06$), than for all the groups ($p = .005$). A trend relationship resulted between *indirect aggression* and *Number of Employees Supervised* ($p = .092$), with workers in the *16 to 50 Employees Supervised* group reporting higher mean scores ($M = 27.88$). For the *16 to 50 Number of Employees*

Supervised group, findings were inconsistent with Baron and Neuman's (1996) research that found that aggression in work environments is more *verbal* than *physical*, more *passive* than *active*, and more *direct* than *indirect*.

Although not significant, employees in the *Over 51 Number of Employees Supervised* group ($M = 123.38$) reported the highest experiences with *total score workplace aggression behaviors*. *Active* and *direct workplace aggression* were significantly higher for employees in the *Over 51 Number of Employees Supervised* group than for all the groups ($p = .029$) and ($p = .023$) respectively. There were no statistically significant differences between *verbal aggression* ($p = .338$), *passive aggression* ($p = .306$), and *Number of Employees Supervised*, however, workers in the *Over 51 Number of Employees Supervised* group reported greater experiences with *verbal* and *passive aggression* behaviors. For the *Over 51 Number of Employees Supervised* group, findings were again closely consistent with Baron and Neuman's (1996) research that found that aggression in work environments is more *verbal* than *physical*, more *passive* than *active*, and more *direct* than *indirect*.

In summary, supervisors who oversee the *Over 51 Number of Employees Supervised* group reported lower perceptions of *Organizational Justice* and also reported higher mean scores for *total score*, *active*, *direct*, *verbal*, and *passive aggression* behaviors. Findings were again consistent with Tepper et al. (2006) who found that supervisors who were treated unfairly (aggressively), expressed their anger by abusing their employees. These employees may be managers who work in call centers who are responsible for unattainable objectives such as lowering customer queues during periods of peak calling times and agent "talk" time with customers.

In contrast, supervisors who oversee smaller work groups such as the *16 to 50 Number of Employees Supervised* category reported higher perceptions of *Organizational Justice*, suggesting that this group is treated fairly. However, this group also reported higher *physical* and *indirect aggression* behaviors. Findings for the *16 to 50 Number of Employees Supervised* category were inconsistent with Baron and Neuman's (1996) research that reported aggression in work environments is more *verbal* than *physical*, more *passive* than *active*, and more *direct* than *indirect* for this group. There were no statistically significant differences ($p = .867$) in *Intention to Leave* and *Number of Employees Supervised*, although employees in the *16 to 50 Employees Supervised* group reported higher mean results ($M = 12.65$) than the other groups.

Differences in demographic characteristics according to supervisory level.

There was a significant association between *Supervisory Level* and *Gender* ($p = .009$). *Males* were highest in the *None Supervisory Level* group (36.1%) than *Females* (26.6%). For the *Manager level* (Oversee First Line), *Males* (12.0%) were higher than *Females* (1.2%). *Female* frequencies were highest in the *Team Leader* group (6.6%).

There was a significant association between *Supervisory Level* and *Race* ($p = .000$). *White* employees were also overwhelming higher in the different *Supervisory Level* groups than any other *Race*, while *Black or African American* employees were highest in the *None Supervisory Level* group (2.9%), followed by *Asian* employees reporting highest in the *Manager* group (1.2%). *Managers* ($M = 3.19$) also had the *Highest Level of Education* ($p = .000$) than all the *Supervisory Level* groups.

Employees in the *Executive (VP Level and Higher)* group had significantly higher ($p = .023$) perceptions of *Organizational Justice* than for almost all the groups.

Procedural Justice was significantly higher for employees in the *Executive (VP Level and Higher)* group ($M = 29.40$), than for all the groups ($p = .000$). There was not a significant effect of *Supervisory Level* on *Distributive Justice* ($p = .264$), *Interpersonal Justice* ($p = .890$), and *Informational Justice* ($p = .893$).

Indirect workplace aggression was significantly higher ($p = .016$) for employees in the *Manager* group ($M = 30.64$) than for all the groups. *Managers* also reported higher experiences with *total score*, *verbal*, *physical*, *active*, and *direct aggression*, although these differences were not significant ($p = < .05$). There was not a significant effect of *Supervisory Level* according to *Intention to Leave* ($p = .275$).

No other study was found that examined these constructs, and empirical support was not available for these findings. Nevertheless, explaining these results from a business prospective, that *Executive (VP Level and Higher)* group had significantly higher perceptions of *Procedural Justice* may very well have been that this group was responsible for producing new processes and procedures to be implemented and filtered down throughout the organization and were insulated from the effect of these new implementations.

Differences in demographic characteristics according to number of employees at work location. The majority of *Male* employees (21.6%) and *Female* employees (19.1%) worked in locations of *Over 250 Employees* than any other group ($p = .001$). Only .8% of *Female* employees worked in locations of *1 to 4 Employees*, which may be a location such as a network central office or shopping mall kiosk. There was not a significant effect of *Number of Employees at Work Location* on *Organizational Justice*

($p = .833$), however, employees who worked in smaller groups, *1 to 4 Employees*, reported greater perceptions of *Organizational Justice* ($M = 69.94$).

Additionally, employees who worked in locations of *5 to 49 Employees* reported greater experiences with *workplace aggression behaviors* (total score, verbal, physical, active, passive, direct, and indirect), although findings were not significant ($p = < .05$).

Intention to Leave was highest for employees who worked in locations of *Over 250 Employees*, however, findings were also not significant ($p = .822$).

No other research was found that examined these constructs, however, call center agents typically work in locations with large work groups handling both inbound and outbound customer calls. D’Cruz and Noronha’s (2006) research on call center agents in India reported that many times agents were met with rudeness and verbal abuse from callers on a daily basis. The agents endured irritating criticism from callers and were under extreme pressure to remain calm and polite in order to retain their jobs (D’Cruz & Noronha, 2006).

Differences in demographic characteristics according to telecommunications sector. There was a significant effect of *Telecommunications Sector* on *Age* ($p = .029$). Employees in the *Wireline* sector were older in *Age* ($M = 4.12$, or between 49 to 57 years) than the *Wireless*, *Cable*, and *Satellite* sectors. The *Wireline* sector was the foundation for the telecommunications industry before the other sectors emerged and may well suggest that older employees elected to stay with the “mother” company as loyal workers.

Cable employees reported greater perceptions of *Organizational Justice* (total scale) than the other sectors, though these differences were not significant ($p = .174$).

Telecom workers in the *Satellite* sector reported the highest experiences with *passive, active, verbal, physical, direct, and indirect workplace aggression behaviors*, although findings were not significant ($p = < .000$). In addition, *Satellite* employees also reported lower educational levels ($M = 2.68$) and were younger in *Age* ($M = 3.42$) than any of the other *Telecommunications Sectors*. *Intention to Leave* was also significantly higher for *Satellite* employees ($p = .017$). The literature reviewed did not support increased *workplace aggression behaviors* and *Intention to Leave* among the *Satellite Telecommunications sector*. However, again consistent with Keashly, Trott, and MacLean's (1994) research, younger employees with low seniority are typically at the bottom of the workplace hierarchy and may be a higher risk for being targeted by bullying behaviors, resulting in leaving their jobs. A summary of Research Questions 1, 2, and 3, in addition to results relating to the consistency of the literature reviewed are presented in Table 5-2.

Table 5-2

Summary of Research Questions and Results

Research Questions	Results	Literature	Consistent with Literature
RQ1	Employee Demographics		
What are employee demographic characteristics, work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), frequency of aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave?	Age 50 to 57, 24.9%	Loi et al. (2006)	No
	Males 61.8%; Females 38.2%		Yes
	Whites, 89.6%		No
	Not Hispanic or Latino 93.4%		No
	College, 62.2%; High School, 27%		No
	Work Profiles		
	Seniority 2 to 5 years, 26.1%	Loi et al. (2006)	Yes
	Non-Management, 67.2%		No
	Management, 32.8%		
	Supervised 0 employees, 73.9%		No
Supervised 1 to 15 employees, 14.5%			
Team Leaders 14.1%; Managers 13.3%; First Line 7.5%		No	

Table 5-2 Continued

Research Questions	Results	Literature	Consistent with Literature
RQ1 Continued What are employee demographic characteristics, work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), frequency of aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave?	Employees working in locations of 250 or more workers, 40%	U.S. Dept. of Labor (2008b)	Yes
	Wireline 49.4%, Wireless 25.3%, Cable, 17.4%, Satellite 7.9%	U.S. Dept of Labor (2008b)	Yes
	Organizational Justice		
	Interpersonal, 3.84 Mean score	Andersson-Straberg et al. (2007)	Yes
	Distributive, 3.36 Mean score	Loi et al. (2006)	Yes
	Procedural, 3.07 Mean score		Yes
	Informational, 3.47 Mean score		No
	Workplace Aggression Behaviors		
	1 in 5 employees	Matthiesen & Einarsen (2007); Namie & Namie (2000)	No
	Passive, 32.09 Mean score	Baron & Neuman (1996);	No
	Active, 38.25 Mean score	Neuman (2003)	No
	Verbal, 27.98 Mean score		Yes
Physical, 16.33 Mean score		Yes	
Direct, 35.03 Mean score		Yes	
Indirect, 24.27 Mean score		Yes	
Intention to Leave			
Turnover Intention	Mobley (1997)	Yes	
RQ2	Age		
Are there differences in work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave according to employee demographic characteristics?	50-57 age group highest seniority.		No
	50-57 age group highest for Non-Management and Management		No
	18-25 worked with most coworkers		No
	26-33 reported higher <i>verbal, physical, active, passive direct, indirect</i> and <i>total score workplace aggression</i> .		No
	18-25 higher <i>Intention to Leave</i> followed by 50-57 age group	Keashly et al. (1994); Price (2001)	Yes

Table 5-2 Continued

Research Questions	Results	Literature	Consistent with Literature
RQ2 (Continued) Are there differences in work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave according to employee demographic characteristics?	Gender		
	Male Non-Management 38.6%		
	Male Management 23.2%		
	Males in hi supervisory levels		
	Females work in locations of more employees than Males		
	Males Organizational Justice Total		
	Males Procedural Justice		
	Males Distributive Justice	Andersson-Straberg et al. (2007)	No
	Males <i>verbal, physical, active, passive direct, and indirect</i>	Zapf & Einarsen (2003)	Yes
	Race		
	White Non-Management 62.2%		No
	White Management 27.7%		No
	American Indian or Alaska Native supervising more employees than the Asian group, the Black or African American group, the White group, and the Other Race group		No
	American Indian or Alaska Native group held higher supervisory positions (Executive VP Level and Higher) than any other Race group.		No
	Black or African American <i>verbal, physical, active and direct</i>		No
	Asians , <i>passive and indirect</i>		No
	Ethnicity		
	Hispanic/Latino Organizational Justice		No
Hispanic/Latino <i>physical, direct</i>	Tajfel & Turner (1979); Neuman & Baron (1998)	Yes	
Hispanic/Latino <i>Intention to Leave</i>		No	
Highest Level of Education			
College-Management 19.9%		No	
College-Non Management 42.3%		No	
Graduate School-Management		No	
College-All sectors <i>wireline, wireless, cable and satellite</i>		No	
College-Organizational Justice		No	
High School- <i>verbal, physical, active</i>		No	
Graduate School- <i>passive and indirect</i>		No	

Table 5-2 Continued

Research Questions	Results	Literature	Consistent with Literature
RQ3 Are there differences in demographic characteristics, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice and informational justice), workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave according to employee work profiles?	Seniority		
	Over 31 years- <i>Age</i> higher		No
	Less than one year- <i>Intention to Leave</i> higher	Keashly et al. (1994)	Yes
	Job Category		
	Management-49 to 57 years of age		No
	Non-Management-41 to 49 years		No
	Non-Management 38.6% Male		No
	Management 23.2% Male		No
	Management 9.5% Female		No
	Non-Management 62.2% White		No
	Management 27.7% White		No
	Non-Management 42.3% College		No
	Management 6.2% Graduate Degree		No
	Management <i>Organizational Justice</i> (Total scale)		No
	Management <i>Procedural Justice</i>		No
	Management <i>Distributive Justice</i>	Leventhal (1980)	Yes
	Management <i>Interpersonal Justice</i>		No
	Management <i>Informational Justice</i>		No
	Management <i>active, passive, verbal, physical, direct, and indirect</i>	Harvey et al. (2006); Tepper et al. (2006)	Yes
	Non-Management- <i>Intention to Leave</i> higher		No
	Number of employees supervised		
	1 to 15 employees- <i>Age</i> higher		No
	0 employees-Males dominated 42.3%		No
	0 employees-White 69.7%		No
	16 to 50 employees- <i>Organizational Justice</i> (Total scale) highest		No
	16 to 50 employees- <i>Procedural Justice</i> highest		No
	16 to 50 employees- <i>Interpersonal Justice</i> highest		No
Over 51 employees- <i>Organizational Justice</i> (Total scale) lowest		No	
Over 51 employees- <i>Interpersonal Justice</i> lowest		No	
Over 51 employees- <i>Informational Justice</i> lowest		No	
Over 51 employees- <i>Distributive Justice</i> lowest	Baron & Neuman (1996)	No	
16 to 50 employees- <i>physical, indirect</i>	Baron & Neuman (1996)	Yes	
Over 51 employees- <i>total score, active. and direct</i>	Tepper et al. (2006)	Yes	

Table 5-2 Continued

Research Questions	Results	Literature	Consistent with Literature
RQ3 (Continued)	<i>Supervisory Level</i>		
Are there differences in demographic characteristics, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice and informational justice), workplace aggression behaviors (passive-active, verbal-physical, direct-indirect), and intention to leave according to employee work profiles?	None-Males 36.1%, Females 26.6%		No
	Manager-Males 12%, Females 1.2%		No
	Team Leader-Females 6.6%		No
	None-White 57.7%, Black 2.9%		No
	Manager-Asian 1.2%		No
	Manager-Highest Education Level		No
	Executive VP- Organizational Justice (Total scale), Procedural Justice		No
	Manager- <i>indirect, verbal, physical, active, total score and direct</i>		No
	<i>Number of Employees at Work Location</i>		
	Over 250 employees-Males 21.6%		No
	Over 250 employees-Females 19.1%		No
	1 to 4 employees-Organizational Justice		
	5 to 49 employees- <i>direct, indirect, verbal, physical, active, passive, and total score</i>		No
	Over 250 employees-Intention to leave		No
	<i>Telecommunications Sector</i>		
	Wireline-Older in age		No
Cable-Organizational Justice (Total Scale)		No	
Satellite- <i>direct, indirect, verbal, physical, active, passive, and total score</i>		No	
Satellite-Lower educational levels		No	
Satellite-Younger in Age	Keashly et al. (1994)	Yes	
Satellite-Intention to leave	(1994)	No	

Summary and Interpretations of Hypotheses Testing

Summary Results of Hypotheses Testing

To test the hypotheses, hierarchical (forward) multiple regression analyses were used to find the best explanatory models for respective hypotheses. Eta correlations were conducted on categorical explanatory variables and dependent variables. Categorical variables with significant relationships to respective dependent variables were converted

to dummy variables (Hypothesis 4) and analyzed with other explanatory continuous variables and dependent variables using Pearson r . Based on the order of the strongest significant or Pearson r correlations, to the weakest with respective dependent variables, the explanatory variables were entered into the hierarchical (forward) linear regression model. For each hypothesis, after significant models were identified, the next step was to select the model having the best indicators of goodness-of-fit. This decision was based on selecting a significant model with one of the highest adjusted R^2 values in combination with a high R^2 . This range of R^2 values identified the percentage of variance in the dependent variable that could be explained by the explanatory variables in the model; and, the error (e) was the percentage of the dependent variable that was not explained by the variables. The analysis of each individual hypothesis follows:

Hypothesis 1: Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of workplace aggression behaviors (passive-active, verbal-physical, direct-indirect, and total score). To test Hypothesis 1, multiple regression analyses using the hierarchical (forward) method were performed to determine whether there was a significant explanatory (correlational) relationship between *Organizational Justice* (procedural justice, distributive justice, interpersonal justice, and informational justice) and the dependent variables *workplace aggression behaviors* (passive-active, verbal-physical, direct-indirect). The four subscales of the *20-Item Organizational Justice* scale and the six subscales of the *60-Item Workplace Aggression Research Questionnaire (WAR-Q)* resulting from EFA were utilized.

Research Hypothesis 1 had seven separate sub hypotheses. Each hypothesis tested a different explanatory relationship among organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) and variations in the dependent variable of *workplace aggression behaviors* ($H_{1a} = \text{passive}$, $H_{1b} = \text{active}$, $H_{1c} = \text{verbal}$, $H_{1d} = \text{physical}$, $H_{1e} = \text{direct}$, $H_{1f} = \text{indirect}$, and $H_{1g} = \text{total score}$) among telecommunications employees. All sub hypotheses were partially supported. The analysis of each individual hypothesis follows:

Hypothesis 1a: Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of passive workplace aggression behaviors. Three different models were produced from the hierarchical regression. Model 3 was selected as the best explanatory model to explain *passive aggression*, with three explanatory variables: *Interpersonal Justice*, *Informational Justice*, and *Distributive Justice*.

Distributive Justice was the most important predictor ($t = -2.494$, $p = .013$, $\beta = -.191$) in the model and had an inverse relationship with *passive aggression*. Higher *Distributive Justice* scores indicated that employees' perceived equitable returns for their efforts were acceptable and correlated with lower *passive aggression*. Employees who responded with higher perceptions of *Distributive Justice* also reported lower experiences with *passive aggression* behaviors.

Informational Justice ($t = -2.235$, $p = .027$, $\beta = -.198$), was the second most important predictor in the model and also had an inverse relationship with *passive aggression*. Higher *Informational Justice* scores indicated that employees' perceptions of fairness of communications from their organizational leaders (e-mail, conference calls,

meetings, training, videos, and announcements) about policy changes, new products, scheduling, and other forms of company communications were adequate, and thus, the employee reported lower episodes of *passive aggression* behaviors.

Lastly, *Interpersonal Justice* was the third most important predictor ($t = -2.014$, $p = .045$, $\beta = -.189$) in the model. The inverse β value of *Interpersonal Justice* also had a negative relationship with *passive aggression*. Higher *Interpersonal Justice* scores indicated that employees' who perceived courteous and civil treatment from their managers and colleagues reported lower incidents of *passive aggression* behaviors.

According to the findings, Hypothesis 1_a was partially supported. *Informational Justice*, *Distributive Justice*, and *Interpersonal Justice* were significant negative explanatory variables of *passive workplace aggression behaviors*. The explanatory model explained a range of 22.5% to 23.7% of the variation in *passive workplace aggression behaviors*. The empirical literature reviewed did not analyze aggression behaviors using Buss's (1961) three dichotomies of aggression behaviors *passive-active*, *physical-verbal*, and *direct-indirect* and the four *Organizational Justice* factors, *Procedural Justice*, *Distributive Justice*, *Interpersonal Justice*, and *Informational Justice*.

Hypothesis 1b: Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of active workplace aggression behaviors. One model was produced from the hierarchical regression. *Interpersonal Justice* ($t = -5.34$, $p = .000$, $\beta = -.363$) was the key predictor in the model and had an inverse relationship with *active aggression*. Higher perceptions of *Interpersonal Justice* indicated that employee's who

perceived polite and fair treatment from their managers and coworkers also experienced lower episodes of *active aggression* behaviors.

According to the findings, Hypothesis 1_b was partially supported. *Interpersonal Justice* was a significant negative explanatory variable of *active workplace aggression behaviors*. The explanatory model explained a range of 12.7% to 13.1% of the variation in *active workplace aggression behaviors*. The empirical literature reviewed did not the constructs of this study, however, Colquitt et al. (2001) and Andersson-Straberg et al. (2007) found that *Interpersonal Justice* was associated with job satisfaction resulting in lower *Intention to Leave*.

Hypothesis 1c: Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of verbal workplace aggression behaviors. Two different models were produced from the hierarchical regression analysis. Model 2 was selected as the best explanatory model to explain *verbal workplace aggression behavior* with two explanatory variables, *Interpersonal Justice* and *Distributive Justice*. *Interpersonal Justice* ($t = -5.503, p = .000, \beta = -.412$), was the most important predictor in the model and had an inverse relationship with *verbal aggression*. Employees who experienced greater perceptions of *Interpersonal Justice* also experienced lower *verbal aggression behaviors*.

Distributive Justice ($t = -2.096, p = .037, \beta = -.157$), was the second most important predictor in the model and also had an inverse relationship with *verbal aggression*. Higher *Distributive Justice* scores indicated that employees' perceived equitable returns for their efforts were acceptable and correlated with lower *verbal*

aggression. Employees who responded with higher perceptions of *Distributive Justice* also reported lower experiences with *verbal aggression* behaviors.

According to the findings, Hypothesis 1_c was partially supported. *Interpersonal Justice* and *Distributive Justice* were significant negative explanatory variables of *verbal* workplace aggression behaviors. The explanatory model explained a range of 25.6% to 26.4% of the variation in *verbal* workplace aggression behaviors. The empirical literature reviewed did not analyze aggression behaviors using Buss's (1961) three dichotomies of aggression behaviors, *passive-active*, *physical-verbal*, and *direct-indirect* and the four *Organizational Justice* factors, *Procedural Justice*, *Distributive Justice*, *Interpersonal Justice*, and *Informational Justice*, however, Colquitt et al. (2001) and Andersson-Straberg et al. (2007) found that *Interpersonal Justice* was associated with job satisfaction resulting in lower *Intention to Leave*.

Hypothesis 1d: Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of physical workplace aggression behaviors. One model was produced from the hierarchical regression. *Interpersonal Justice* ($t = -3.655, p = .000, \beta = -.250$), was the key predictor in the model and had an inverse relationship with *physical workplace aggression behaviors*. Higher *Interpersonal Justice* scores indicated that employees' who perceived courteous and civil treatment from their managers and coworkers reported lower episodes of *physical aggression* behaviors.

According to the findings, Hypothesis 1_d was partially supported. *Interpersonal Justice* was a significant negative explanatory variable of *physical* workplace aggression behaviors. The explanatory model explained a range of 5.8% to 6.2% of the variation in

physical aggression behaviors. The empirical literature reviewed did not analyze aggression behaviors using this study's constructs, however, Colquitt et al. (2001) and Andersson-Straberg et al. (2007) found that *Interpersonal Justice* was associated with job satisfaction resulting in lower *Intention to Leave*.

Hypothesis 1e: Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of direct workplace aggression behaviors. One model was produced from the hierarchical regression. *Interpersonal Justice* ($t = -5.228, p = .000, \beta = -.358$), was the key predictor in the model and had an inverse relationship with *direct aggression*. Higher *Interpersonal Justice* scores indicated that employees' who perceived courteous and civil treatment from their managers and coworkers reported lower incidents of *direct aggression* behaviors.

According to the findings, Hypothesis 1e was partially supported. *Interpersonal Justice* was a significant negative explanatory variable of *direct* workplace aggression behaviors. The explanatory model explained a range of 12.3% to 12.8% of the variation in *direct workplace aggression behaviors*. The empirical literature reviewed did not analyze aggression behaviors using Buss's (1961) three dichotomies of aggression behaviors, *passive-active*, *physical-verbal*, and *direct-indirect* and the four *Organizational Justice* factors, *Procedural Justice*, *Distributive Justice*, *Interpersonal Justice*, and *Informational Justice*, however, Colquitt et al. (2001) and Andersson-Straberg et al. (2007) found that *Interpersonal Justice* was associated with job satisfaction resulting in lower *Intention to Leave*.

Hypothesis 1f: Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of indirect workplace aggression behaviors. One model was produced from the hierarchical regression. *Interpersonal Justice* ($t = -6.505, p = .000, \beta = -.418$), was the key predictor in the model and had an inverse explanatory relationship with *indirect workplace aggression behaviors*. Higher *Interpersonal Justice* scores indicated that employees' who perceived courteous and civil treatment from their managers and coworkers reported lower incidents of *indirect aggression* behaviors.

According to the findings, Hypothesis 1_f was partially supported. *Interpersonal Justice* was a significant negative explanatory variable of *indirect workplace aggression behaviors*. The explanatory model explained a range of 17.1% to 17.5% of the variation in *indirect workplace aggression behaviors*. The empirical literature reviewed did not analyze aggression behaviors using Buss's (1961) three dichotomies of aggression behaviors *passive-active, physical-verbal, and direct-indirect* and the four *Organizational Justice* factors, *Procedural Justice, Distributive Justice, Interpersonal Justice, and Informational Justice*, however, Colquitt et al. (2001) and Andersson-Straberg et al. (2007) found that *Interpersonal Justice* was associated with job satisfaction resulting in lower *Intention to Leave*.

Hypothesis 1g: Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of total score workplace aggression behaviors. One model was produced from the hierarchical regression. *Interpersonal Justice* was the most important predictor ($t = -7.000, p = .000, \beta = -.472$) in the model and had an inverse relationship

with *total score workplace aggression behaviors*. Higher *Interpersonal Justice* scores indicated that employees' who perceived courteous and civil treatment from their managers and coworkers reported lower incidents of *total score aggression behaviors*.

According to the findings, Hypothesis 1_g was partially supported. *Interpersonal Justice* was a significant negative explanatory variable of *total score workplace aggression behaviors*. The explanatory model explained a range of 21.8% to 22.3% of the variation in *total score workplace aggression behaviors*. The empirical literature reviewed did not examine this study's constructs, however, Colquitt et al. (2001) and Andersson-Straberg et al. (2007) found that *Interpersonal Justice* was associated with job satisfaction resulting in lower *Intention to Leave*.

Hypothesis 2: Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant negative explanatory variables of intention to leave. Two models were produced from the hierarchical regression analysis. Model 2 was selected as the best explanatory model to explain *Intention to Leave*, with two explanatory variables, *Interpersonal Justice* and *Procedural Justice*. *Interpersonal Justice* was the most important predictor ($t = -2.537, p = .012, \beta = -.207$) in the model and had an inverse relationship with *Intention to Leave*. Greater employee perceptions of being treated with respect and sensitivity by decision makers and coworkers (Bies & Moag, 1986), resulted in lower *Intention to Leave* the organization.

Procedural Justice was the second most important predictor in the model ($t = -2.165, p = .032, \beta = -.177$) and also had an inverse relationship with *Intention to Leave*. Greater employee perception of fairness of procedures and general principles used to

make decisions within the organization (Thibaut & Walker, 1975; Leventhal, 1980), resulted in lower *Intention to Leave*.

According to the findings, Hypothesis 2 was partially supported. *Interpersonal Justice* and *Procedural Justice* were significant *negative* explanatory variables of *Intention to Leave*. The explanatory model explained a range of 10.9% to 11.8% of the variation in *Intention to Leave*. Findings were partially consistent with previous research by Andersson-Straberg et al. (2007) and Colquitt et al. (2001) that *Interpersonal Justice* was associated with job satisfaction, resulting in lower employee intention to leave their organization.

Hypothesis 3: Workplace aggression behaviors (passive-active, verbal-physical, direct-indirect) are significant positive explanatory variables of intention to leave. One model was produced from the hierarchical regression. *Passive aggression* ($t = -3.851, p = .000, \beta = .271$) was the key predictor in the model and had a positive relationship with *Intention to Leave*. Employees who experienced higher *Passive aggression* behaviors resulted in a greater propensity of *Intention to Leave* the job.

Analysis of the sole predictor in the model indicated that *Passive aggression* involves withholding something that the target needs or values (Buss, 1961). Some examples are refusing to provide the target with information or resources required to do his or her job, or giving the silent treatment (Baron & Neuman, 1996, 1998; Baron, Neuman, & Geddes, 1999; Geddes & Baron, 1997; Neuman & Keashly, 2004).

According to the findings, Hypothesis 3 was partially supported. *Passive aggression* behaviors were found to be a significant positive explanatory variable of *Intention to Leave*. The explanatory model explained a range of 6.9% to 7.3% of the

variation in *Intention to Leave*. Findings were consistent with Mobley's (1977) and Steers and Mowday's (1981) models. Mobley (1977) theorized that when an employee experiences dissatisfaction on the job, thoughts of quitting and intention to leave "may be the last step prior to actual quitting" (p. 237). Steers and Mowday's (1981) model proposes that a sequence of variables lead to an employee leaving or staying with an organization. The first sequence is job expectations and values met followed by affective responses such as job satisfaction, organizational commitment, and job involvement, which influence an employee's intention to stay or leave (Steers & Mowday, 1981).

Hypothesis 4: Employee demographic characteristics, work profiles, organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), and workplace aggression behaviors (passive-active, verbal-physical, direct-indirect) are significant explanatory variables of intention to leave. Three different models were produced from the hierarchical regression analysis. Model 3 was selected as the best explanatory model to explain *Intention to Leave*, with three explanatory variables, *Distributive Justice*, *Satellite Telecommunications*, and *Informational Justice*. *Distributive Justice* was the most important predictor ($t = -2.402$, $p = .017$, $\beta = -.198$) in the model and had an inverse relationship with *Intention to Leave*. Lower *Distributive Justice* scores indicated that employees' perceived equitable returns for their efforts (Leventhal, 1980) were not acceptable and correlated with higher *Intention to Leave*. The lower employees' perceptions of *Distributive Justice*, the higher were employees' propensity for *Intention to Leave* their job.

Satellite Telecommunications was the second most important predictor ($t =$

2.347, $p = .020$, $\beta = .170$) in the model and had a positive relationship with *Intention to Leave*. *Satellite Telecom* employees had a higher propensity for leaving their jobs than any other telecom industry sector.

Lastly, *Informational Justice* ($t = -1.946$, $p = .053$, $\beta = -.160$), was the third most important predictor in the model and had an inverse relationship with *Intention to Leave*. Lower employee perceptions of *Informational Justice* scores were associated with higher *Intention to Leave*. *Informational Justice* reflect employee perceptions of communications from their organizational leaders (e-mail, conference calls, meetings, training, videos, and announcements) about policy changes, new products, scheduling, and other forms of company communications.

According to the findings, Hypothesis 4 was partially supported. *Distributive Justice*, *Satellite Telecommunications*, and *Informational Justice* were significant explanatory variables of *Intention to Leave*. The explanatory model explained a range of 11.3% to 12.8% of the variation in *Intention to Leave*.

In this analysis, *Distributive Justice*, *Informational Justice*, and employees working in the *Satellite Telecommunications* sector were significant explanatory variables of *Intention to Leave*, which was unexpected. Of the four telecommunications sectors, *Satellite* workers significantly experienced lower perceptions of *Distributive Justice* and *Informational Justice* which were significant explanatory variables of *Intention to leave* their organization. There was no empirical research found in the literature that suggested employee dissatisfaction in the *Satellite Telecommunications* sector.

However, *Intention to Leave* findings were consistent with Mobley's (1977) and Steers and Mowday's (1981) models. Mobley (1977) theorized that when an employee experiences dissatisfaction on the job, thoughts of quitting and intention to leave "may be the last step prior to actual quitting" (p. 237). Steers and Mowday's (1981) model proposes that a sequence of variables lead to an employee leaving or staying with an organization. The first sequence is job expectations and values met followed by affective responses such as job satisfaction, organizational commitment, and job involvement, which influence an employee's intention to stay or leave (Steers & Mowday, 1981). The results of testing the research hypotheses and linkages to the literature are summarized in Table 5-3.

Table 5-3

Summary of Hypotheses Testing and Results

Research Hypotheses	Variance Explained	Literature	Hypothesis Testing Results And Explanatory Variables in Model Selected
H1 Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of workplace aggression behaviors (passive-active, verbal-physical, direct-indirect).	21.8% to 22.3%	Partially Supported Andersson-Straberg et al. (2007); Colquitt et al. (2001)	Partially Supported <i>Interpersonal Justice</i> was a significant negative explanatory variable of <i>passive, active, verbal, physical, direct</i> and <i>indirect</i> aggression behaviors.
H _{1a} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of <i>passive</i> workplace aggression behaviors.	22.5% to 23.7%	Partially Supported Andersson-Straberg et al. (2007); Colquitt et al. (2001)	Partially Supported <i>Informational Justice, Distributive Justice, and Interpersonal Justice</i> were significant negative explanatory variables of <i>passive</i> workplace aggression behaviors.

Table 5-3 Continued

Research Hypotheses	Variance Explained	Literature	Hypothesis Testing Results And Explanatory Variables in Model Selected
H _{1b} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of <i>active</i> workplace aggression behaviors.	12.7% to 13.1%	Partially Supported Andersson-Straberg et al. (2007); Colquitt et al. (2001)	Partially Supported <i>Interpersonal Justice</i> was a significant negative explanatory variable of <i>active</i> workplace aggression behaviors.
H _{1c} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of <i>verbal</i> workplace aggression behaviors.	25.6% to 26.4%	Partially Supported Andersson-Straberg et al. (2007); Colquitt et al. (2001)	Partially Supported <i>Interpersonal Justice</i> and <i>Distributive Justice</i> were significant negative explanatory variables of <i>verbal</i> workplace aggression behaviors.
H _{1d} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of <i>physical</i> workplace aggression behaviors.	5.8% to 6.2%	Partially Supported Andersson-Straberg et al. (2007); Colquitt et al. (2001)	Partially Supported <i>Interpersonal Justice</i> was a significant negative explanatory variable of <i>physical</i> workplace aggression behaviors.
H _{1e} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of <i>direct</i> workplace aggression behaviors.	12.3% to 12.8%	Partially Supported Andersson-Straberg et al. (2007); Colquitt et al. (2001)	Partially Supported <i>Interpersonal Justice</i> was a significant negative explanatory variable of <i>direct</i> workplace aggression behaviors.
H _{1f} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of <i>indirect</i> workplace aggression behaviors.	17.1% to 17.5%	Partially Supported Andersson-Straberg et al. (2007); Colquitt et al. (2001)	Partially Supported <i>Interpersonal Justice</i> was a significant negative explanatory variable of <i>indirect</i> workplace aggression behaviors.
H _{1g} Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant explanatory variables of employee perceptions of <i>workplace aggression behaviors</i> . (Total score).	21.8% to 22.3%	Partially Supported Andersson-Straberg et al. (2007); Colquitt et al. (2001)	Partially Supported <i>Interpersonal Justice</i> , was a significant negative explanatory variable of <i>total score workplace aggression behaviors</i> .

Table 5-3 Continued

Research Hypotheses	Variance Explained	Literature	Hypothesis Testing Results And Explanatory Variables in Model Selected
H2 Organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice) are significant negative explanatory variables of intention to leave.	10.9% to 11.8%	Partially Supported Bies & Moag (1986); Thibaut & Walker (1975); Leventhal (1980); Andersson-Straberg et al. (2007); Colquitt et al. (2001)	Partially Supported <i>Interpersonal Justice</i> and <i>Procedural Justice</i> were significant <i>negative</i> explanatory variables of <i>Intention to Leave</i> .
H3 Workplace aggression behaviors (passive, active, verbal, physical, direct, indirect) are significant positive explanatory variables of intention to leave.	6.9% to 7.3%	Mobley (1977); Steers & Mowday (1981)	Partially Supported <i>Passive aggression</i> behavior was a significant positive explanatory variable of <i>Intention to Leave</i> .
H4 Employee demographic characteristics, work profiles, perceptions of organizational justice (procedural justice, distributive justice, interpersonal justice, and informational justice), and workplace aggression behaviors (passive, active, verbal, physical, direct, and indirect), are significant explanatory variables of intention to leave.	11.3% to 12.8%	No empirical research found on <i>Satellite</i> sector. Partially Supported Steers & Mowday (1981); Mobley (1977)	Partially Supported <i>Distributive Justice</i> , <i>Satellite Telecom</i> , and <i>Informational Justice</i> were significant explanatory variables of <i>Intention to Leave</i> .

Implications

Managerial Implications

Organizations may use the results of this study to design interventions aimed at recognizing workplace aggression behaviors, reprimanding perpetrators, and consoling victims. Beyond just affecting the individual target, it also influences if the organization's social environment encourages employees' intention to leave. The targets of workplace aggression may claim that the employer has failed to uphold the

organization's employment contract (Tepper, 2000; Leventhal, 1980). This includes failure to warn of foreseeable risks, a failure to maintain a safe workplace, negligence in hiring workers who have a propensity to aggress, or managers who are negligent in supervising these employees (Leymann, 1996). Further managerial implications are outlined as follows:

1. Embrace a zero-tolerance policy for workplace aggression behaviors beginning from top-down management to create a harmonious workplace for all employees. The policy should mandate that workplace aggression is unacceptable and results in severe consequences including termination. Organizations should foster a culture of respect for the individual, teamwork, employee wellness, and safety. Organizations that endeavor to reduce hostile and aggressive behaviors may also need to evaluate how fairly their managers and supervisors are treated which may impact subordinate abuse (Tepper et al., 2006).
2. Train current leaders on conflict management and employee relations and the appropriate use of transformational leadership by means of a leadership development plan (Leymann, 1996).
3. Screen workers thoroughly to determine who may have had previous behavioral issues in their prior employment. New-hire orientations should introduce the enforcement of a zero-tolerance workplace aggression policy.
4. Train employees on how to observe signs of workplace aggression behaviors (bullying, mobbing, or harassment) to ensure early detection so that behaviors can be dealt with or prevented.

5. The anti-workplace aggression policy should include processes for reporting and investigation of aggression as well as procedures to handle the employee reporting aggression behaviors of their superiors or co-workers. Reporting procedures should include anti-retaliation stipulations to ensure that employees have a “safe” avenue to report adverse treatment without fear of consequences.
6. Anti-workplace aggression policies should include criteria for punishment of perpetrators of workplace aggression as a consequence, such as counseling, suspension, or termination. Employers should be proactive with disciplinary actions when an aggressor violates company policies and causes a threat to other workers. Provisions for consoling targeted victims, such as counseling or paid leave, should also be included as part of an employee wellness program.
7. Anonymous and confidential organizational-wide surveys should be conducted periodically to evaluate employee satisfaction within the workplace environment. In order to preserve confidentiality, surveys should be conducted by a neutral third-party to ensure employees can express their true feelings.
8. Provide employees with adequate communications through meetings, workshops and open discussion forums regarding organizational changes such as downsizing, restructuring, mergers, and budget cuts, in order to avoid interpersonal conflicts that may escalate to workplace aggression behaviors. Additionally, an organization’s corporate website that is accessible by all employees could offer explanations about major decisions and changes that may be delivered in a user-friendly, succinct format.

9. Managers need to be cognizant of retaining talented employees. Although employees may feel comfortable with their current positions, co-workers, and working conditions, they may feel stifled with the lack of promotional opportunities and lack of additional job responsibilities and may have a propensity to search outside of the organization to satisfy these needs (Yeh, 2007). Managers who mentor and counsel employees regarding in-house career opportunities and promotions may divert intention to leave.
10. It is also important that managers identify talented employees who have high career mobility versus those employees with lower job mobility (Yeh, 2007). Each group may respond differently to workplace aggression behaviors regarding intention to leave.
11. Improvements to Title VII laws legislating employee protection from all forms of workplace aggression behaviors.

Conclusions

1. Of the telecommunications workers sampled for this study, 1 in 5 employees or 21% reported frequent experiences with *workplace aggression behaviors*.
2. The population sample of telecommunications sectors were closely consistent with the U.S. Department of Labor, Bureau of Labor Statistics (2008b) target population.
3. *Intention to Leave* was significantly highest for employees aged 18 to 25 ($p = .007$), followed by employees in the 50 to 57 age group ($p = .004$).
4. There were more *Male, Non-Management* (38.6%) and *Management* employees (23.2%) than *Female, Non-Management* (28.6%) and *Management* (9.5%)

employees. *Males* tended to be in higher levels of supervision than *Female* employees. *Females* reported working in locations of more employees than *Males* ($p = .000$). Although not significant, *Males* reported greater experiences with *passive, active, verbal, physical, direct, and indirect aggression behaviors* than *Females*.

6. *Hispanic or Latino* employees reported greater perceptions of fairness and equitable treatment in the workplace than *Not Hispanic or Latino* employees.
7. *Supervisory Level* was significantly higher ($p = .023$) for employees who attended *Graduate School*, than the *College* and *High School* levels, which indicates that many management employees are more highly educated.
8. *Intention to Leave* was significantly higher for employees in the *Less than one year* category ($p = .041$) than it was for any other *Seniority* group.
9. There were more *Males* in both the *Non-management* (38.6%) and *Management* (23.2%) job categories than *Females*. Only 9.5% of *Females* were *Management* workers. Although not significant, the number of *White* respondents were overwhelmingly greater than any other *Race* according to *Non-Management* (62.2%) and *Management* (27.7%) employees.
10. Although perceptions of *Organizational Justice* were higher for *Management* employees, *Management* also reported greater experiences with *active, passive, verbal, physical, direct, and indirect aggression behaviors* than *Non-Management* employees, however, these results were not significant ($p = < .05$).
11. *Non-Management* employees reported higher *Intention to Leave* than *Management* employees, though findings were not significant ($p = .173$). Since

Management employees had greater experiences with *workplace aggression behaviors*, findings were consistent with Tepper et al. (2006) who found that supervisors who were treated unfairly expressed their anger by abusing their employees. As a result, *Intention to Leave* was higher for *Non-Management* workers.

12. *Satellite* employees reported the highest experiences with *passive, active, verbal, physical, direct, and indirect Workplace Aggression Behaviors*, although findings were not significant ($p = < .000$). In addition, *Satellite* employees also reported lower educational levels ($M = 2.68$) and were younger in *Age* ($M = 3.42$) than any other *Telecommunications Sector*. *Intention to Leave* was significantly higher for employees in the *Satellite Telecommunications* sector ($p = .017$), than any other sector. *Distributive Justice* and *Informational Justice* were also significant explanatory variables of *Intention to Leave* for the *Satellite* employees. The literature reviewed did not support increased *Workplace Aggression, Organizational Justice, and Intention to Leave* among the *Satellite Telecommunications* sector.
13. *Passive aggression* behaviors were found to be a significant positive explanatory variable of *Intention to Leave*. Employees who experienced higher *Passive aggression* behaviors resulted in a greater propensity of *Intention to Leave* the job.
14. *Interpersonal Justice* and *Procedural Justice* were significant *negative* explanatory variables of *Intention to Leave*. Findings indicated that the greater the employee perceptions of *Interpersonal Justice* and *Procedural Justice*, the

lower the employee's *Intention to Leave* the organization. Colquitt et al. (2001) research suggested that fair and respectful treatment in terms of interpersonal relations may promote job satisfaction and prevent employee turnover.

15. In accordance with previous research, Colquitt's (2001) *Organizational Justice* scale was defined as a multifaceted measure which encompasses perceptions of *distributive, procedural, interpersonal, and informational justice*. Colquitt (2001) recommended that this measure be used in studies of fairness in organizational settings. As a result of this study's internal consistency reliability analysis, results suggest that this instrument may be used to measure perceptions of justice that are also related to *workplace aggression behaviors*.

Limitations

This study was one of the more comprehensive studies about *workplace aggression behaviors, organizational justice, and intention to leave* among U.S. telecommunications workers. The limitations of this study are as follows:

1. This non-experimental study was weaker than an experimental design.
2. The sample size of 241 telecommunications workers does not represent the entire telecom population from across the United States.
3. The sample size was not sufficient to generalize findings with confidence to the target population.
4. Findings may be difficult to generalize to other industry sectors.
5. Zoomerang Market Tools offered respondents incentives to participate in the survey, which may have posed a threat to external validity. In addition, risks of obtaining biased data resulting from respondents who recruit their friends to

participate in the study may affect external validity, since the results may be difficult to generalize to the target population.

6. This research did not explore organizational changes such as downsizing, mergers and acquisitions, budget cuts, and management changes, which may have an effect on workplace aggression.
7. The survey was launched by Zoomerang Market Tools in February, 2009. At the time, the U.S. economy was experiencing financial turbulence. In addition to the telecom industry, many organizations were experiencing increased downsizing. The results of this study may well have been impacted by the economic downturn since individuals may have been reluctant to leave their jobs regardless of adverse working conditions in an unstable job market. Although workers experienced various forms of workplace aggression and organizational injustices, they may have been reluctant to entertain the notion of leaving their jobs.
8. Respondents were not requested to identify the demographic characteristics or organizational hierarchy of the perpetrator of aggression, such as *Superior*, *Co-worker*, *Subordinate*, *Customer*, or *Other*. This information may be useful in analyzing the root cause of workplace aggression.
9. This study did not actually measure if the employee left the organization, but was merely considering leaving. Also, employees may have been evaluating quitting as an option in lieu of getting fired. In addition, this study did not measure if the perpetrator (supervisor, manager, or coworker) actually left the workplace either through retirement, job transfer, promotion or termination, which would result in the targeted employee most likely remaining with the organization.

Recommendations for Future Study

1. Based on the interpretations and conclusions from this study, future studies are recommended to further explore relationships among *Workplace Aggression Behaviors*, *Organizational Justice*, and *Intention to Leave* among *Satellite telecommunications* workers. No previous literature was found which investigated *Workplace Aggression* and *Intention to Leave* among the *Satellite Telecommunications* sector, which may provide fertile ground for future research.
2. Although employees may feel comfortable with their current positions, co-workers, and working conditions they may feel stifled with the lack of promotional opportunities and lack of additional job responsibilities and may have a propensity to search outside of the organization to satisfy these needs. An area for future studies is to explore career opportunities and promotions which may drive intention to leave.
3. Future studies utilizing this study's model to analyze workplace aggression, organizational justice, and intention to leave during a prosperous economy with low unemployment and employees with career mobility should be conducted as a comparison to the results of this study.
4. Test this model with different industry sectors, geographical areas, and cultures.
5. Perform a longitudinal study utilizing this study's model.
6. Conduct a qualitative study using this study's model in order to capture the individual "human voice" of the telecommunications worker.
7. Further identify and explore those employees with high movement capital and those with low movement capital as identified by Yeh (2007).

8. Explore organizational changes such as downsizing, mergers and acquisitions, budget cuts, and managerial changes, which may have an effect on workplace aggression.
9. The *WAR-Q* (Neuman & Keashly, 2004) identified sources of aggression, *Superior, Co-worker, Subordinate, Customer, or Other*, which was not included in this study's online survey. Examining sources of aggression and identifying perpetrators using this study's model would provide valuable data to further analyze an organizations' leadership team, customer base, and workplace environment in order to take the necessary steps to either offer employees conflict management training, team building, or customer satisfaction coaching.
10. Cultural, racial, ethnic, religious, age, and sexual differences of employees may play a large role in evaluating workplace aggression behaviors. Further examination of individual employee differences may provide useful data for an organization's leadership team to manage and treat employees respectfully.

This study sought to explore workplace aggression behaviors, organizational justice and intention to leave among U.S. telecommunications workers. In order to draw a rich mixture of telecom employees within the sample, the researcher included wireline, wireless, satellite, and cable telecommunications providers. In addition, management (exempt) and non-management (non-exempt) employees were also included in the population sample for this study. Findings indicated that employees who were targets of aggressive behaviors and also experienced lower perceptions of organizational justice had a greater propensity for intention to leave the organization.

Chapter V discussed outcomes of the analyses related to answering the research questions and testing the hypotheses that resulted from the research purposes of this study. Findings were interpreted based on the review of literature and review of instrumentation. Theoretical and managerial implications in addition to the conclusions drawn from interpretations were also discussed. The limitations of the study and recommendations for future study were addressed.

The researcher's goal was to contribute to the growing North American academic literature base on workplace aggression and to also enhance awareness in order to encourage lawmakers to establish legislation to protect U.S. workers against this egregious behavior. Legislation should also include provisions to protect, console, and reward targeted victims.

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APPENDIX A
Survey Instrument

Filter Questions

The following filter questions will be posted on the first screen when potential participants access the SurveyMonkey.com survey. If the potential participant answers “no” to any of the following 4 questions, the participant will be exited from the survey and will be thanked for agreeing to participate.

1. Are you a full-time employee in telecommunications? (Wireline, wireless, cable, other program distributors, or satellite and telecom resellers).
2. Are you 18 years old or older?
3. Are you located inside of the United States?
4. Are you a full-time telecommunications management or non-management worker? (**not** a sub-contractor, temporary or seasonal employee).

Part 1: Demographic Characteristics

Instructions: Please select one response or fill in the blank that best describes yourself for each of the following questions.

1. Age in Years (Select a category)

- 1. 18 to 25
- 2. 26 to 33
- 3. 34 to 41
- 4. 42 to 49
- 5. 50 to 57
- 6. 58 and above

2. Gender 1. Male 2. Female

3. Race: Select the primary race you consider yourself to be.

- 1. White
- 2. Black or African American
- 3. American Indian or Alaska Native
- 4. Asian
- 5. Native Hawaiian or other Pacific Islander
- 6. Some Other Race

4. Ethnicity:

- 1. Hispanic or Latino
- 2. Not Hispanic or Latino

- 5. Highest level of education:**
- 1. Lower than High School
 - 2. High School
 - 3. College
 - 4. Graduate School

Part 2: Work Profile

Instructions: Please select one response or fill in the blank that best describes yourself for each of the following questions.

- 1. Seniority: Please indicate the number of years you have been employed full time with your organization: (Select a category)**

- 1. less than one year
- 2. 2 to 5 years
- 3. 6 to 10 years
- 4. 11 to 15 years
- 5. 16 to 22 years
- 6. 23 to 30 years
- 7. over 31 years

- 2. Select the job category that best describes your current position (check one):**

- 1. Non-Management
- 2. Management

- 3. If you selected "Management" for your answer to question 2, how many people do you supervise? (others add 0)**

- 1. 0
- 2. 1 to 15 employees
- 3. 16 to 50 employees
- 4. over 51 employees

- 4. What is the level of your supervisory responsibility?**

- 1. None
- 2. Team leader
- 3. First line supervisor
- 4. Manager (Oversee First Line).
- 5. Executive (VP Level and Higher).

5. Select the number of telecommunications employees at your work location:

- 1. 1 to 4
- 2. 5 to 49
- 3. 50 to 249
- 4. 250 or more

6. In what telecommunications sector are you employed?

- 1. Wireline telecommunications
- 2. Wireless telecommunications
- 3. Cable and other program distributors
- 4. Satellite and telecommunications resellers

Part 3: Perceptions of Organizational Justice

Instructions: Please select one answer for each of the following statements: 1 = to a very small extent, 2 = to a small extent, 3 = neutral, 4 = to a large extent, and 5 = to a very large extent.

The following items refer to the procedures used to arrive at your outcomes at work. To what extent:	To a very small extent	To a small extent	Neutral	To a large extent	To a very Large extent
	1	2	3	4	5
1. Have you been able to express your views and feelings during those procedures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Have you had influence over the outcomes arrived by those procedures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Have those procedures been applied consistently?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Have those procedures been free of bias?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Have those procedures been based on accurate information?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Have you been able to appeal the outcomes arrived at by those procedures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Have those procedures upheld ethical and moral standards?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**The following items refer to your outcomes at work.
To what extent:**

1. Does your outcome reflect the effort you have put into your work?
2. Is your outcome appropriate for the work you have completed?
3. Does your outcome reflect what you have contributed to the organization?
4. Is your outcome justified given your performance?

	To a very small extent	To a small extent	Neutral	To a large extent	To a very large extent
	1	2	3	4	5
1.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**The following items refer to the authority figure who enacted the procedure.
To what extent:**

1. Has he/she treated you in a polite manner?
2. Has he/she treated you with dignity?
3. Has he/she treated you with respect?
4. Has he/she refrained from improper remarks or comments?

	To a very small extent	To a small extent	Neutral	To a large extent	To a very large extent
	1	2	3	4	5
1.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**The following items refer to the authority figure who enacted the procedure.
To what extent:**

1. Has he/she been candid in his/her communications with you?
2. Has he/she explained the procedures thoroughly?
3. Were his/her explanations regarding the procedures reasonable?
4. Has he/she communicated details in a timely manner?
5. Has he/she seemed to tailor his/her communications to individuals' specific needs?

	To a very small extent	To a small extent	Neutral	To a large extent	To a very large extent
	1	2	3	4	5
1.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Note: From Colquitt, J. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology*, 86(3), 386-400. Permission granted by J. Colquitt.

<i>A</i>	<i>B</i>						
<p>Have you been subjected to any of the behaviors listed below in the past 12 months? Only consider those behaviors that have occurred in your workplace.</p> <p><i>Note:</i> The behaviors listed below represent actions that vary dramatically in terms of their intensity, seriousness, and consequences. As a result, there are instances where very dissimilar items may be grouped together.</p>	<p>How often have you been subjected to this behavior <u>in your workplace</u> over the <u>past 12 months</u>?</p>						
	Never	Once	A Few Times	Several	Monthly	Weekly	Daily
19. Been yelled at or shouted at in a hostile manner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Been subjected to negative comments about your intelligence or competence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Had others consistently fail to return your telephone calls and/or respond to your memos or e-mail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Had your contributions ignored by others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Had someone interfere with your work activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Been subjected to mean pranks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Been lied to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. Had others fail to give you information that you really needed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Been subjected to threats and/or harassment for "blowing the whistle" about activities at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Had others fail to warn you about impending dangers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. Been denied a raise or promotion without being given a valid reason	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. Had signs or notes left that embarrassed you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. Been subjected to derogatory name calling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. Been blamed for other peoples' mistakes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. Been the target of rumors or gossip	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. Shown little empathy/sympathy when you were having a tough time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. Had co-workers fail to defend your plans or ideas to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. Been given unreasonable workloads or deadlines—more than others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37. Had others destroy or needlessly take resources that you needed to do your job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. Been accused of deliberately making an error	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39. Been subjected to unwanted attempts to touch, fondle, kiss, or grab you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40. Been subjected to threats to reveal private or embarrassing information about you to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41. Been subjected to temper tantrums when disagreeing with someone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
42. Been prevented from expressing yourself (e.g., interrupted when speaking)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43. Had attempts made to turn other employees against you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44. Had someone flaunt his/her status or treat you in a condescending manner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45. Been subjected to excessively harsh criticism about your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
46. Had someone else take credit for your work or ideas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<i>A</i>	<i>B</i>						
<p>Have you been subjected to any of the behaviors listed below in the past 12 months? Only consider those behaviors that have occurred in your workplace.</p> <p><i>Note:</i> The behaviors listed below represent actions that vary dramatically in terms of their intensity, seriousness, and consequences. As a result, there are instances where very dissimilar items may be grouped together.</p>	<p>How often have you been subjected to this behavior <u>in your workplace</u> over the <u>past 12 months</u>?</p>						
	Never	Once	A Few Times	Several Times	Monthly	Weekly	Daily
47. Been kicked, bitten, or spat on	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
48. Been criticized for non-work (personal) life and activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
49. Been subjected to negative comments about your sexual orientation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50. Been subjected to racist remarks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
51. Been reprimanded or "put down" in front of others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
52. Had someone hit you with an object	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53. Been subjected to ethnic or racial jokes or slurs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54. Been told how to spend your personal time when not at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
55. Been subjected to unwanted terms of endearment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56. Been subjected to suggestive and/or offensive stories	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
57. Been subjected to sexist remarks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
58. Been threatened with physical harm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
59. Been pushed, shoved, thrown, or bumped into with unnecessary force	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
60. Been raped or sexually assaulted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
61. Been assaulted with a weapon or other dangerous object	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Note: From Neuman, J. H., & Keashly, L. (2004, April). Development of the Workplace Aggression Research Questionnaire (WAR-Q): Preliminary data from the Workplace Stress and Aggression Project. In R. J. Bennett & C. D. Crossley (Chairs), *Theoretical advancements in the study of anti-social behavior at work*. Symposium conducted at the meeting of the Society for Industrial and Organizational Psychology, Chicago, IL. Permission granted by J. H. Neuman.

Part 5: Turnover Intention:

Instructions: Please select one answer for each of the following statements: 1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, and 5 = *strongly agree*

1. I plan to leave the organization as soon as possible.

1 = *strongly disagree*

2 = *disagree*

3 = *neither agree nor disagree*

4 = *agree*

5 = *strongly agree*

2. Under no circumstances will I voluntarily leave the organization.

1 = *strongly disagree*

2 = *disagree*

3 = *neither agree nor disagree*

4 = *agree*

5 = *strongly agree*

3. I would be reluctant to leave the organization.

1 = *strongly disagree*

2 = *disagree*

3 = *neither agree nor disagree*

4 = *agree*

5 = *strongly agree*

4. I plan on staying in the organization as long as possible.

1 = *strongly disagree*

2 = *disagree*

3 = *neither agree nor disagree*

4 = *agree*

5 = *strongly agree*

5. If perpetrator left, I would stay with the organization.

1 = *strongly disagree*

2 = *disagree*

3 = *neither agree nor disagree*

4 = *agree*

5 = *strongly agree*

Note. From Kim, S. W., Price, J. L., Mueller, C. W., & Watson, T. W. (1996). The determinants of career intent among physicians at a U.S. Air Force hospital. *Human Relations*, 49(7), 947. Permission granted to adapt by C. W. Mueller.

APPENDIX B

Permission to Use the Scales in this Study

Permission to use Workplace Aggression Research Questionnaire (WAR-Q)

From: Joel H. Neuman [REDACTED] Sent: Wed 4/16/2008 7:22 AM
To: Thomas Wilson; [REDACTED]
Cc: [REDACTED]
Subject: Re: Tom Wilson from Lynn University in Boca Raton, Florida
Attachments:

Dear Mr. Wilson:

I recently had a death in the family and have been distracted. I'm not sure if I answered your email. Please consider this authorization to use the WAR-Q for research purposes. I would, however, request that you share results obtained with the instrument as we continue to validate the instrument.

Good luck with your research.

Joel Neuman

At 01:41 PM 4/1/2008, Thomas Wilson wrote:

Hello Dr. Neuman:

A few months ago you sent a copy of the WAR-Q that Dr. Keashly and you co-authored. I would like your permission to use the WAR-Q in my dissertation study entitled "Effects of Workplace Aggression on Organizational Justice and Intention to Leave". Since I worked in telecom for over 28 years, I will be using telecom employees as my population sample.

According to my dissertation committee, a positive response granting permission to an email is acceptable to my IRB panel.

Many thanks,

Tom Wilson
[REDACTED]

JOEL H. NEUMAN, Ph.D.
Associate Professor of Management & Organizational Behavior
and Director of the Center for Applied Management
School of Business
State University of New York at New Paltz
New Paltz, NY 12561-2443
Voice: [REDACTED] Fax: [REDACTED]
E-Mail: [REDACTED]

<http://www.newpaltz.edu/~neumanj/>

Permission to use Organizational Justice Scale

Subject: Re: Organizational Justice Scale
Date: 10/17/2007 11:30:33 A.M. Eastern Daylight Time
From: [REDACTED]
To: [REDACTED]

Sent from the Internet (Details)

I don't believe any permission is needed to use the items as they are published in an academic journal and are therefore in the public domain. If you want a formal statement of permission, this email can constitute that statement (I wrote all of the items in the scale, the citations included in the table are merely to the conceptual sources that inspired the content of the items).

Jason

|||||
Jason A. Colquitt, Ph.D.
Department of Management
Warrington College of Business
University of Florida
201 Stuzin Hall - P.O. Box 117165
Gainesville, FL 32611-7165
Phone: [REDACTED]
Fax: [REDACTED]
E-mail: [REDACTED]
Web: www.cba.ufl.edu/mang/faculty/facultyinfo.asp?WEBID=889
|||||

On Oct 17, 2007, at 11:25 AM, [REDACTED] wrote:

- > Dr. Colquitt, thank you for the information. Lynn University
- > didn't have a copy of the book you suggested, but ordered it from
- > St. Thomas University Law library for me. As far as the
- > Organization Justice Scale you mentioned in your 2001 article, are
- > you the individual who holds the copyright on it? or do I need to
- > contact the individual authors for permission to use the scale in
- > my dissertation?
- > I am preparing for my IRB defense and need to ensure I have the
- > necessary permissions.
- >
- > Thank you in advance for your help.

- > Tom Wilson

Permission to use Turnover Intention Scale

From: Mueller, Charles W [REDACTED] Sent: Wed 12/10/2008 11:10 AM
To: Thomas Wilson
Cc:
Subject: RE: Permission to adapt turnover intention scale
Attachments:

Tom,
You have my permission to modify the survey by adding the items you list in this email.
I wish you success in your research.
Charles Mueller

-----Original Message-----

From: Thomas Wilson [mailto:[REDACTED]]
Sent: Wednesday, December 10, 2008 9:56 AM
To: Mueller, Charles W
Cc: [REDACTED]
Subject: Permission to adapt turnover intention scale

Hello Drs. Mueller and Price:

My name is Tom Wilson, and I am a Ph.D. candidate with Lynn University in Boca Raton, Florida. My dissertation is about the "Effects of Workplace Aggression Behaviors on Organizational Justice and Intention to Leave."

Previously, you both gave me permission to use your turnover intention scale from your 1996 article, The Determinants of Career Intent Among Physicians at a U.S. Air Force Hospital."

After conferring with my dissertation committee, I would like your permission to adapt your scale by adding another question, as I indicated below:

Current scale:

1. I plan to leave the organization as soon as possible.
2. Under no circumstances will I voluntarily leave the organization.
3. I would be reluctant to leave the organization.
4. I plan on staying in the organization as long as possible.

Additional question:

5. If perpetrator left, I would stay with the organization.

Many thanks in advance for your permission to add the additional item. Your response to this e-mail will suffice as permission to satisfy my Institutional Review Board's requirements.

Respectfully,

Tom Wilson, Ph.D.
[REDACTED]

APPENDIX C

E-mail Invitation Letter

Greetings Fellow Telecommunications Employee:

My name is Tom Wilson. I am a former BellSouth employee (retired October, 2003, Atlanta, GA), and I am currently a doctoral student at Lynn University in Boca Raton, Florida. I am in the process of conducting scholarly research for my dissertation, and I am inviting you to participate in this project.

The topic of my dissertation is: *Workplace Aggression, Organizational Justice and Intention to Leave among U.S. Telecommunications Workers.*

As you may well know there have been many concerns in today's workplace about various types of employee behaviors of both management and non-management personnel. Some researchers have identified employee workplace behaviors as a contributing factor to job satisfaction and organizational loyalty. The purpose of my research is to gather the telecom employee's perspective. Full-time management and non-management telecommunications employees across the U.S. have been invited to participate in this research.

Please follow this [link](#) to go to the consent form. PLEASE NOTE: Your firm's internet security system may prevent you from accessing the site directly. If you are unable to access the link above, please copy and paste the following address into your web browser:

https://www.zoomerang.com/s.aspx?sm=oOEaR7GEI22xRmSH9_2bGCUA_3d_3d

By clicking the "I agree" button at the bottom of the page you will be consenting to participate in this anonymous survey on Zoomerang Market Tools. I would greatly appreciate your taking 12-15 minutes from your already busy schedule to complete this 96 item survey. Feel free to forward this to your home email if time does not allow during your work day. Your participation is voluntary and your responses are anonymous. No one will be able to identify you from your survey responses. Please note that the anonymous format of this survey limits my ability to honor requests to revoke consent as I will not be able to match responses with individual participants. After completing this survey, feel free to forward this email to other telecommunications employees who may be interested in participating. Since this survey examines employee workplace behaviors in the telecom industry, I would appreciate it if you only forward to those full time employees within the telecommunications sector in order to avoid diluting the research study's results.

The survey will only be available online until Monday, Mar. 9, 2009. The information gathered is designated for use solely in this study. I will keep only the responses to the questionnaire which Zoomerang Market Tools transmits to a spreadsheet for 5 years. This survey has been set up so that Zoomerang Market Tools will NOT save your IP address.

If you have any questions, please feel free to contact me, Tom Wilson at [REDACTED] or [REDACTED]. Thank you for your time and participation.

Respectfully,

Tom Wilson, BBA, MBA, Ph.D.c.

Doctoral Candidate, Lynn University, Boca Raton, Florida
To be removed from this mailing list, please click here.

APPENDIX D

Lynn University IRB Approval Letter



Lynn University

Principal Investigator: Tom Wilson

Project Title: Effects of Workplace Aggression Behaviors on Organizational Justice and Intention to Leave

IRB Project Number: 2009-004 Request for Expedited Review of Application and Research Protocol for a New Project

IRB Action by the IRB Chair or Another Member or Members Designed by the Chair:

Expedited Review of Application and Research Protocol and Request for Expedited Review (FORM 3): Approved Approved; w/provision(s)

COMMENTS:

Consent Required: No Yes Not Applicable Written Signed

Consent forms must bear the research protocol expiration date of 02/02/2010.

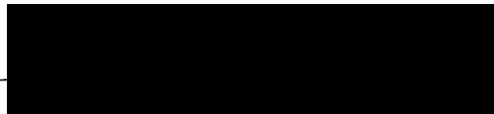
Application to Continue/Renew is due:

1) For an Expedited IRB Review, one month prior to the due date for renewal

2) Other:

Name of IRB Chair: Farideh Farazmand

Signature of IRB Chair _____



Date: 02/03/09

Cc. Dr. Crawford

Institutional Review Board for the Protection of Human Subjects
Lynn University
3601 N. Military Trail Boca Raton, Florida 33431

APPENDIX E

Authorization for Informed Consent

Informed Consent

Institutional Review Board for the Protection of Human
Subjects
Lynn University
3601 N. Military Trail, Boca Raton, Florida 33431

Lynn University

THIS DOCUMENT SHALL ONLY BE USED TO PROVIDE
AUTHORIZATION FOR VOLUNTARY CONSENT.

PROJECT TITLE: Effects of Workplace Aggression
Behaviors on Organizational Justice and Intention to Leave

Project IRB Number: 2009-004 Lynn University, 3601 N.
Military Trail, Boca Raton, Florida 33431

I, Tom Wilson am a doctoral student at Lynn University. I
am studying Global Leadership, with a specialization in
Corporate and Organizational Management. One of my
degree requirements is to conduct a research study.

DIRECTIONS FOR THE PARTICIPANT: You are being
asked to participate in my research study. Please read this
carefully. This form provides you with information about the
study. The Principal Investigator (Tom Wilson) will answer
all of your questions. Ask questions about anything you
don't understand before deciding whether or not to
participate. Your participation is entirely voluntary and you
can refuse to participate without penalty or loss of benefits
to which you are otherwise entitled. You acknowledge that
you are at least 18 years of age, and that you do not have
medical problems or language or educational barriers that
precludes understanding of explanations contained in this
authorization for voluntary consent.

PURPOSE OF THE RESEARCH STUDY: The study is
about various types of employee behaviors of both
management and non-management personnel. Some

researchers have identified employee workplace behaviors as a contributing factor to job satisfaction and organizational loyalty. The purpose of the research is to gather the telecom employee's perspective. Full-time management and non-management telecommunications employees across the U.S. have been invited to participate in this research.

PROCEDURES: After reading the consent form, you may click on the "I agree" button at the end of the form. You will need to complete a five part questionnaire that includes 96 questions. The questionnaire should take you no more than 15 minutes to complete using the online tool. After completing the questionnaire, be assured that your questionnaire will be received without any personal information, such as your e-mail address, your name, or your IP address. Do not leave any identifiers on the questionnaire.

POSSIBLE RISKS OR DISCOMFORT: This study involves minimal risk. You may find that some of the questions are sensitive in nature. In addition, participation in this study requires a minimal amount of your time and effort.

POSSIBLE BENEFITS: There may be no direct benefit to you in participating in this research, but knowledge may be gained, which may help the telecommunications industry in the U.S. to increase their competitive advantage through job satisfaction and organizational loyalty.

FINANCIAL CONSIDERATIONS: There is no financial compensation for your participation in this research. There are no costs to you as a result of your participation in this study.

ANONYMITY: Anonymity will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding

the interception of data sent via the Internet by any third parties. The researcher will not identify you and data will be reported as "group" responses. Participation in this survey is voluntary; clicking on the "I agree" button will constitute your informed consent to participate. All information will be held in strict confidence and will not be disclosed unless required by law or regulation.

RIGHT TO WITHDRAW: You are free to choose whether or not to participate in this study. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate.

CONTACTS FOR QUESTIONS/ACCESS TO CONSENT FORM: Any further questions you have about this study or your participation in it, either now or any time in the future, will be answered by Tom Wilson, who may be reached at [REDACTED], and Dr. Ann Crawford, faculty advisor who may be reached at [REDACTED]. For any questions regarding your rights as a research subject, you may call Dr. Farideh Farazmand, Chair of the Lynn University Institutional Review Board for the Protection of Human Subjects, at [REDACTED].

INVESTIGATOR'S AFFIDAVIT: I hereby certify that a written explanation of the nature of the above project has been provided to the person participating in this project. A copy of the written documentation provided is attached hereto. By the person's consent to voluntarily participate in this study, the person has represented that he/she is at least 18 years of age, and that he/she does not have a medical problem or language or educational barrier that precludes his/her understanding of my explanation. Therefore, I hereby certify that to the best of my knowledge the person participating in this project understands clearly the nature, demands, benefits, and risks involved in his/her participation.

Sincerely,

Tom Wilson

Please check below

- 1. I Agree
- 2. I Disagree

IRB approval date: February 3, 2009

IRB expiration date: February 2, 2010



APPENDIX F

Zoomerang Market Tools Contract



Proposal

32158

Date 1/23/09:

Dear Thomas,

We are pleased to present this quote for your upcoming project. Please review this quote carefully. Your signature below will signify an acceptance of the project, agreement with the terms below, and confirmation of authorization to execute the project.

Name:	Thomas A. Wilson - Ph.D. Candidate, Lynn University
Company:	Lynn University
Address:	[Redacted]
Phone:	[Redacted] home
Email:	[Redacted]
Project Name:	Effects of Workplace Aggression Behaviors on Organizational Justice and Intention to Leave

Sample Details:

Desired Responses:	Up to an N = 275
Demographics/Attributes:	Industry: Telecommunications
Incentive:	50 ZoomPoints
Incidence*:	100%

**Note¹: If you have not provided the incidence rate, we will assume 100%. If responses indicate that the survey incidence rate is below 100%, we will adjust pricing accordingly if additional sample needs to be provided to meet the desired responses.*

**Note²: Zoomerang's Screen Out feature provides a way to keep unwanted data from being counted in your completed surveys. However, if you choose not to use this feature at the beginning of the survey to screen out unwanted data, then all responses will be considered complete and shall be charged the per completion fee associated with this proposal.*

Sample Team Deliverables:

Incentive:	Provide incentive as detailed above for this survey.
Email Invites:	Create the email invitation using the standard Zoomerang Sample email invitation.
Number of Mailings:	Host the survey and deploy via email the survey to sample identified above. There will be a single mailing of the survey invitation.
Reporting:	Real-time reporting and data export available via Zoomerang account.

Customer Responsibilities:

Survey Content:	Create and complete survey in its final form within Zoomerang and ensure that survey is complete and accurate.
Testing:	Test the survey prior to project launch.
Demographics:	Within the body of the survey, ask any specific demographic/behavioral data that is required for results analysis. (A separate demographic report will not be provided).
Billing:	Provide PO (if necessary) and billing contact and billing instructions if invoice is to be received by anyone other than the signer of this quote.

Project Timeline:

Deployment:	The survey will be deployed within 24 hours (excluding Saturday, Sunday and
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U.S. holidays) upon receipt of this signed agreement and final verification that the survey is complete and ready to deploy.

Zoomerang Account Information

Zoomerang zPro Account: [REDACTED] u

TOTAL PROJECT PRICE:

Expedite Fee	N / A
Sample Price	\$2,995.00 USD
TOTAL:	\$2,995.00 USD

Please note this request for proposal is valid until midnight on 1.2.09.

Payment terms:

Payment for Zoomerang Programming and Sample are expected upon deployment.

All customers: Please provide a valid credit card. This card will be automatically charged if payment is not received within 60 days of order execution. You will be notified prior to the card charging.

First time customers: Payment is required up front by valid credit card or check.

Other terms:

Client agrees and warrants that the contents of email invitations and surveys, and use of the Zoomerang service, will be in compliance with all laws, including those concerning spam, privacy (including children's online privacy rights), defamation and communications decency.

Client is responsible for ensuring that survey invitations and surveys do not violate or infringe upon the trademark, trade name, copyright, trade secret or other intellectual property rights or other rights of any person or entity.

MarketTools retains exclusive ownership of all sample provided for Client's project. Panelists' email address and other personally identifiable information are the property of MarketTools and will not be disclosed to client or any other person. The client and any additional research partners may not capture any personally identifiable information of our panelists within the survey. No survey invitations or surveys will advertise or promote a product or service.

This document supplements your Zoomerang subscription agreement. Together they contain the complete and entire understanding between you and MarketTools concerning the subject matter hereof. Your signature below will signify your acceptance of the project quotation and terms, and will confirm authorization to execute the project.

Please fax signed quotation to: [REDACTED] or respond to this email with your confirmation of acceptance.

Please note, orders cannot be deployed until this quote is accepted in writing.

Signature: _____ Date: _____

Client Billing Information: (If different than contact information above)

Billing Contact:	
Company:	
Billing Address:	
Phone:	
Email:	
P.O. # (if applicable)	N / A

MarketTools Contact Information:

Name:	Marc Thornton
Company:	MarketTools, Inc.
Address:	[REDACTED]
Phone:	[REDACTED] (toll-free US and Canada) [REDACTED] (Outside U.S. and Canada) [REDACTED] (Direct)
Email:	[REDACTED]
Tax ID:	[REDACTED]

MarketTools, Inc. 150 Spear Street, Suite 600, San Francisco, CA 94105-1535

Page 2 of 2

Thomas A. Wilson (TAW)

e-Signed 2009-01-31 12:17PM EST

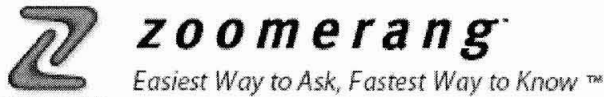
[REDACTED]
Lynn University
Ph.D. Candidate

Document Integrity Verified

EchoSign Transaction Number: XGNEZ2GXW3S4A

APPENDIX G

Zoomerang Market Tools Procedures and Security Policy



BUY ONLINE OR
CALL 800-316-0662

CONTACT
SUPPORT

USE IT FREE [Sign up for the advanced version >](#)

Zoomerang ("we" or "Zoomerang") is owned and operated by MarketTools, Inc. We provide and maintain an Internet Web site (the "Site") for the benefit of users of our services ("you" or "User"). On our Site we provide hosted tools and processes to allow you to create individualized surveys, obtain survey results, use related services, and, if subscribed, applications using text messaging via a mobile telephone number (SMS) (collectively and as applicable, "Services").

The Services and use of the Site are provided to you subject to the terms and conditions set forth in these Terms of Use ("Terms of Use" or "Agreement") and our Privacy Policy, and any other rules and policies set forth on this Site. The terms and conditions below and any other rules or policies set forth on this Site comprise the entire agreement between you and Zoomerang and supersede all prior agreements between us.

1. ACKNOWLEDGMENT AND ACCEPTANCE

PLEASE READ THE FOLLOWING TERMS OF THIS AGREEMENT CAREFULLY. BY COMPLETING THE REGISTRATION PROCESS, YOU ACCEPT AND AGREE TO ALL OF THE TERMS AND CONDITIONS SET FORTH IN THIS AGREEMENT AND IN OUR PRIVACY POLICY. YOU HEREBY ACKNOWLEDGE THAT YOU ARE 18 YEARS OF AGE OR OLDER.

2. USER RESPONSIBILITIES.

These Terms of Use give you important obligations. You agree to the following responsibilities:

- Compliance with our Anti-Spam policy. Please see Section 7 below.
- Lawful use of the Services only. Please see Section 8 below.
- Creation and maintenance of all content in the account including but not limited to survey content, email/SMS content, address books and current billing and contact information.
- Email/mobile phone number list and Address Book maintenance including opt-out contact information and immediate removal of opt-outs and bounces from email/mobile phone number lists and the address book.
- Payment of all agreed subscription fees.
- Full responsibility for all activity associated with your use of our Site and Services.
- Compliance with all other obligations set forth in these Terms of Use.

We reserve the right to deactivate your account(s) as we deem appropriate or necessary, without notice. You enter and use the Site and the Services at your own risk. Zoomerang is not responsible for your activities, surveys, content, results or questions from respondents, other data, or any other matter concerning your use of the Site or the Services. We recommend that you keep track of your survey results and other data in your own personal records, as we reserve the right to discontinue your account(s) or terminate the Services at any time. We are not responsible for the deletion of any data that is in or has been added to your account(s). If a User account remains inactive for a period of 18 months, we will deactivate the account.

3. MODIFICATION TO SERVICES PROVIDED; TERMS OF USE.

You acknowledge and agree that we may, with or without notice, modify or terminate the Services and/or the Site. Further, we may modify these Terms of Use from time to time, including the fees we charge for Services. Modifications of the Service may include, without limitation, changes in the maximum allowable memory space, number of entries allowed in the Email/SMS List Manager, number of survey respondents, number of surveys, and number of survey questions that may be created, saved, sent or used through the Site (collectively, "Thresholds").

We will notify you of changes we make by posting a notice on our Site, or, if we choose, by sending you an email. If you do not accept the changes, you must terminate your subscription or other use at that time. Your

use of the Site or the Services after the notice is posted (or we send you the email) shall be deemed to be acceptance of the modification or termination of the Services or these Terms of Use.

4. PAYMENT TERMS; AUTOMATIC RENEWAL; CANCELLATION; MONEY-BACK GUARANTEE.

You agree to pay, and we will automatically charge, all account fees, including any usage that exceeds the Thresholds at the rates posted, and including any applicable taxes, at the rates in effect when the fees are incurred. We may change the fees then in effect, or add new fees, by giving Users advance notice. You must provide us with valid credit card information, and must promptly update the Account Information page in Zoomerang with any changes in credit card validity or expiration date. We will keep your credit card information confidential. If payment cannot be charged to the credit card you have on file with us, we reserve the right to suspend or terminate your account and access to the Services. The 100% money back guarantee is only valid for 30 days from your purchase date.

We will automatically renew and charge your account upon every expiration date of your subscription, unless you have selected "OFF" for auto-renew on the Account Information page. The renewal charge will be equal to the original subscription price, unless we notify you otherwise in advance. You may cancel your subscription at any time by selecting the "Cancel Membership" button on the Account Information page in Zoomerang. Upon receipt of your cancel selection, we will promptly terminate your access to the Services. No refunds of subscription fees will be given. We reserve the right to terminate your subscription and/or discontinue Services at any time for any reason.

5. REGISTRATION & PASSWORD.

You will provide current, complete, accurate information in the registration section of the Site. You will further update and keep that information current as needed. You will provide a password in order to access the Services and your account. Email login must be a valid email address maintained by you. You are solely responsible for maintaining the confidentiality of your password and account information. You will immediately notify us of any unauthorized account activity, or any unauthorized use of your email list(s) or any other breach of security you become aware of.

Zoomerang is a single user service. Multiple logins and passwords to the same account are not available or permitted. You may not share logins and passwords with others. Sharing login information is in violation of this Agreement and may result in immediate account termination.

6a. PRIVACY.

We are committed to protecting the privacy and confidential information of Users. For more information on our Privacy Policy, please click [here](#). You agree to maintain and comply with a privacy policy that is consistent with the Zoomerang Privacy Policy. You are responsible for all decisions with respect to the personally identifiable information of persons (other than ZoomPanelists) that respond to your surveys or to whom you send surveys. With respect to the personally identifiable information of ZoomPanel members, you agree to comply with the terms and conditions of the [zoompanel.com](#) privacy policy. You represent and warrant that your surveys will not target children under 13 and that you will not knowingly collect personally identifiable information from children under 13.

6b. CONFIDENTIALITY.

We agree not to use any of your Confidential Information (defined below) for any purpose except to operate the Site and Services in accordance with this Agreement. We agree not to disclose any of your Confidential Information to any third party other than to our employees and consultants who are bound by confidentiality obligations and are required to have access to the Confidential Information in order to operate the Site and Services. Nothing in this Agreement limits our right to independently develop, acquire or market products, ideas, or businesses, without use of your Confidential Information. "Confidential Information" may include, solely to the extent entered into the Services or Site by you, (a) technical information, know-how and other intellectual property, to the fullest extent that such information is maintained as a trade secret by you; (b) confidential marketing strategies; (c) confidential future product plans; (d) confidential financial information (including pricing); and (e) other confidential business information. Confidential Information will not include any information that (i) was publicly known and generally available in the public domain prior to the time of disclosure by you; (ii) becomes publicly known and generally available after disclosure by you through no action or inaction of ours; (iii) is already in our possession at the time of disclosure by you; (iv) is obtained by us from a

third party without a breach of such third party's obligations of confidentiality; (v) is independently developed by us without use of or reference to your Confidential Information; or (vi) is required by law to be disclosed by us, provided that we give you prompt written notice of such requirement prior to such disclosure and assistance in obtaining an order protecting the information from public disclosure.

7. ANTI-SPAM POLICY.

Zoomerang, a leading Web-based application for research and feedback, is committed to being a trusted member of the Internet community. As such, we have adopted a firm anti-spam stance. Spam can deluge a recipient's email box and waste the recipient's time and money. Spam often causes recipients to complain to their Internet Service Providers who in turn may block or restrict access from legitimate services like Zoomerang, and Users, like you.

To help recipients be free from spam, and to maximize the availability of our Services to our community of Users, we have taken a "zero tolerance" stand against spam. You acknowledge, warrant and agree that:

- You will not engage in any spamming activities in your use of the Services.
- You understand that Zoomerang is serving as "survey host" and is not the sender or originator of any survey, and that you are therefore solely responsible for your email/SMS-ing activities using the Services.
- You warrant that you either have an ongoing business or personal relationship with or have obtained consents to send email/SMS messages inviting participation in a survey to the persons on your own email/mobile phone list and on any lists you have acquired from a third party.
- Your use of the Site and Services will not violate any U.S. or foreign spamming, junk mail or other related laws or regulations prohibiting or discouraging unsolicited mail.
- If you engage in any unlawful spamming activity, Zoomerang will report such conduct to the appropriate authorities and turn over any and all information, including personally identifiable information, to appropriate law enforcement persons or entities.
- We may request at any time that you provide proof that your email/SMS recipients have agreed to receive email/SMS messages from you. We may require that you provide the name of a list vendor and documentation of specific opt-in processes you or the vendor have used.

We will terminate the account of any User determined to have used the Services in connection with any spam email/SMS or otherwise breached these Terms of Use. Please be advised that we may also terminate your account if your mailings result in high bounce rates, a report or complaint of spam against the sender, poor monitoring of recipient consents including tax address book and email/mobile phone list management, or lack of compliance with anti-spam guidelines. We reserve the right to terminate your account(s) and your use of the Services, without notice, if we believe your activities are not in compliance with this Anti-Spam policy. We thank you for your compliance with our Anti-Spam policy and your commitment to good email/SMS-ing practices.

8. OTHER PROHIBITED USES.

You acknowledge, warrant and agree that:

- You will not transmit through the Service or the Site any pornographic, obscene, offensive, threatening, harassing, libelous, hate-oriented, harmful, defamatory, racist, illegal or otherwise objectionable material or content.
- You will not send any transmission that attempts to hide your identity or represents you as someone else.
- Any attempt by you to transmit, publish or distribute material or content that promotes, provides or relates to instructional information about illegal activities or promotes physical harm or injury against any individual or group is strictly prohibited.
- You will not use the Service or the Site to send any materials, including surveys and requests to take surveys, to any persons under 18 years of age unless and until you have taken and follow all necessary action and compliance pursuant to state and federal laws.
- You will not upload or distribute in any way any files that contain viruses, corrupted files or any similar software or programs that may damage the operation of anyone else's computer, the Service or the Site.
- You will not interfere or disrupt networks connected to the Service and the Site.
- Any attempt by you to gain unauthorized access to any computer system, including accounts, lockers or databases maintained by and for Zoomerang, is strictly prohibited.
- You will comply with all laws, rules and regulations regarding transmission of technical data exported from the United States.

If you engage in any activity set forth in this paragraph or violate any terms or conditions of these Terms of Use, your account will be terminated and use of the Service and Site prohibited. We will report any unlawful conduct to the appropriate authorities and turn over any and all information regarding such activity to appropriate persons or entities.

9. DISCLAIMER OF WARRANTIES.

YOU EXPRESSLY ACKNOWLEDGE AND AGREE THAT USE OF THE SERVICE AND THE SITE IS AT YOUR SOLE RISK. THE SERVICE AND THE SITE ARE PROVIDED ON AN "AS IS" AND "AS AVAILABLE" BASIS.

TO THE FULLEST EXTENT ALLOWED BY LAW, ZOOMERANG EXPRESSLY DISCLAIMS ALL WARRANTIES AND CONDITIONS OF ANY KIND, WHETHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. THE CONTENTS OF THE SERVICES OR THE SITE MAY CONTAIN BUGS, ERRORS, PROBLEMS OR OTHER LIMITATIONS. ZOOMERANG ASSUMES NO LIABILITY OR RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN CONTENT.

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ZOOMERANG MAKES NO WARRANTY THAT THE SERVICE OR SITE WILL MEET YOUR REQUIREMENTS OR THAT THE SERVICE WILL BE UNINTERRUPTED, TIMELY, SECURE, VIRUS-FREE, ERROR-FREE, ACCURATE OR RELIABLE; NOR DOES ZOOMERANG MAKE ANY WARRANTY AS TO ANY INFORMATION THAT MAY BE OBTAINED THROUGH THE SERVICE OR SITE OR THAT DEFECTS IN THE SOFTWARE FOR THE SERVICE WILL BE CORRECTED OR THAT THE SITE IS FREE OF VIRUSES OR OTHER HARMFUL COMPONENTS.

YOU UNDERSTAND AND AGREE THAT ANY MATERIAL AND/OR DATA DOWNLOADED OR OTHERWISE OBTAINED THROUGH USE OF THE SERVICE OR SITE IS DONE AT YOUR OWN DISCRETION AND RISK AND THAT YOU WILL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO YOUR COMPUTER SYSTEM OR LOSS OF DATA THAT RESULTS FROM THE DOWNLOAD OF SUCH MATERIAL OR DATA.

ZOOMERANG MAKES NO WARRANTY REGARDING ANY GOODS OR SERVICES PURCHASED OR OBTAINED THROUGH THE SERVICE OR SITE OR ANY TRANSACTIONS ENTERED INTO THROUGH OR BASED UPON THE SERVICE OR THE SITE.

NO ADVICE OR INFORMATION, WHETHER ORAL OR WRITTEN, OBTAINED BY YOU FROM THE SERVICE OR SITE OR THROUGH THE SERVICE OR SITE SHALL CREATE ANY WARRANTY NOT EXPRESSLY MADE HEREIN.

10. LIMITATION OF LIABILITY.

TO THE FULLEST EXTENT PERMISSIBLE PURSUANT TO APPLICABLE LAW, NEITHER ZOOMERANG NOR ANY PARENT ENTITIES, SUBSIDIARIES, AFFILIATES, OFFICERS OR EMPLOYEES SHALL BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES ARISING OUT OF YOUR ACCESS TO, USE OF, INABILITY TO USE, OR RELIANCE ON THE SERVICE OR ANY SURVEYS, SURVEY RESPONSES OR SURVEY RESULTS, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IF YOU ARE DISSATISFIED WITH THE SERVICE, THE MATERIALS AVAILABLE ON OR THROUGH THE SERVICE OR THE SITE, OR WITH ANY OF THE TERMS OF THIS AGREEMENT, YOUR SOLE AND EXCLUSIVE REMEDY IS TO DISCONTINUE USING THE SERVICE AND LEAVE THE SITE IMMEDIATELY.

11a. PROPRIETARY RIGHTS.

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11b. NO MISAPPROPRIATION OR MISUSE OF NAMES, MARKS, OTHER PROPRIETARY MATERIAL.

You agree not to use, misuse or misappropriate any brand names, trademarks, service marks, patents, images, text or other proprietary material or content of another on or through the Service or the Site. If you use any such proprietary material or content, by doing so, you warrant that you have the right and authority to do so.

12. LINKS AND ADVERTISERS.

Zoomerang may provide advertising space and/or links and pointers to Internet sites maintained by third parties. Zoomerang has not reviewed all of the third -party sites nor reviewed any products or services they may provide. Zoomerang is not responsible for nor does it endorse the contents or any products or services of such third parties or their sites. **ZOOMERANG DOES NOT CONTROL IN ANY RESPECT ANY INFORMATION, PRODUCTS OR SERVICES OFFERED OR SUGGESTED BY THIRD PARTIES ON THE SITE. ZOOMERANG DOES NOT ENDORSE OR OTHERWISE WARRANT OR GUARANTEE THE PRODUCTS OR SERVICES THAT ARE EITHER ADVERTISED ON THE SITE OR CONNECTED BY LINK.**

13. TERMINATION.

These Terms of Use and the Service may be terminated by Zoomerang at any time. Zoomerang shall not be liable to you or any third party in any manner for termination of the Service. In the event you should become dissatisfied with the Terms of Use or any modifications thereof, or with the Service or the Site, your only recourse is to discontinue use of the Service, terminate your subscription, and give notice to us of these actions. Upon termination, your right to use the Service and the Site cease immediately and Zoomerang shall have no obligation whatsoever to retain, forward or make available to you any surveys, survey responses or survey results.

14. INDEMNIFICATION.

You agree to defend, indemnify and hold harmless Zoomerang, its parent entities, subsidiaries, affiliates, officers, and employees, from any and all claims and demands, including attorneys' fees, due to or arising from your use of the Site or the Service, surveys, survey responses, survey results and any other conduct related in any way to the Service or the Site, including but not limited to breaching any warranty or provision contained in these Terms of Use.

15. JURISDICTION.

These Terms of Use and the relationship between you and Zoomerang shall be treated as if entered into and executed in the State of California and shall be governed and construed in accordance with the laws of the State of California, without regard to conflict of law principles, and also excluding the United Nations Convention on Contracts for the International Sale of Goods. You agree to submit to personal and exclusive jurisdiction and venue of the courts in the counties of San Francisco, California USA. Zoomerang makes no representation that the materials and content on the Site or relating to the Services are appropriate or available for use in other locations, and accessing them from territories where their contents are illegal is strictly forbidden. Those who access the Services or the Site from other locations do so on their own initiative and at their own risk and are responsible for compliance with local laws. Any claim or demand under these Terms of Use must be made within 1 year of the occurrence of the underlying facts.

16. NATURE OF AGREEMENT.

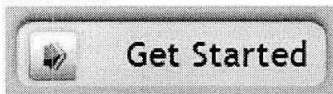
You agree that your completion of the registration procedure constitutes agreement to these Terms of Use. Further, these Terms of Use are the entire and only agreement between you and Zoomerang and supersede any prior or other understandings, representations or warranties including, but not limited to, any nondisclosure agreements, purchase orders, license agreements, service agreements, invoices or other terms and conditions that you may provide to us in respect of the Site or Services. You agree that each use of the Services and the Site reaffirms your acknowledgment and agreement to the most current version of these Terms of Use.

17. GENERAL PROVISIONS.

In any dispute arising from the relationship between you and Zoomerang or these Terms of Use, the prevailing party shall be entitled to reasonable attorneys' fees and costs. The failure by Zoomerang to enforce any right or provision under these Terms of Use shall not constitute a waiver of that provision or any other provision of these Terms of Use. If any provision of these Terms of Use shall be determined to be invalid or unenforceable by a court of competent jurisdiction, the other provisions shall remain in full force and effect.

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